[redacted]

UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.

Before The Honorable Monica Bhattacharyya
Administrative Law Judge

In The Matter Of CERTAIN HIGH-STRENGTH ALUMINUM OR ALUMINUM-ALLOY COATED STEEL, AND AUTOMOTIVE PRODUCTS AND AUTOMOBILES CONTAINING SAME	Inv. No. 337-TA-1402

[redacted]**COMPLAINANT'S REPLY POST-HEARING BRIEF**

[redacted]

TABLE OF CONTENTS

I. INTRODUCTION 1

II. THE '602 PATENT 3

A. Infringement 3

1. The Tested VF 8 Parts Demonstrate Infringement by The VF 9 3

2. The VinFast Accused Products Have The Claimed Intermediate, Intermetallic and Superficial Layers 4

B. Technical Domestic Industry 11

1. The Subpoenaed Tier 1 Manufacturers Hot Stamp Practicing DI Direct Products, Including Tested and Non-Tested Products 11

2. The DI Direct Products Have the Claimed Intermediate, Intermetallic and Superficial Layers 13

C. Validity 18

1. Priority Date of The Asserted Patents 18

2. The Asserted Patents Are Not Invalid 23

a) Overview of The Alleged Prior Art 25

(i) Multiple Alleged Prior Art References Do Not Qualify as Printed Publications Because VinFast Failed to Show That They Were Publicly Accessible 25

(ii) VinFast Grossly Distorts The Testimony to Assert That Several References Disclose The Asserted Claims 27

(iii) VinFast's Unsupported Attorney Argument Does Not Accurately Describe the References 28

b) The Passat 1049 Does Not Anticipate 32

(i) VinFast Did Not Prove That The Passat 1049 Is Prior Art 32

(ii) VinFast Cannot Save Its Unreliable Testing Methodology by Unsupported Attorney Argument 33

(iii) VinFast Did Not Prove The Passat 1049 Anticipates 34

(iv) VinFast Did Not Show That The Passat Meets the Claimed Compositional Layers 39

c) Lachmann Does Not Anticipate 40

(i) VinFast Did Not Prove Lachmann Is Prior Art 40

(ii) VinFast Did Not Prove Lachmann Is Enabled 41

(iii) VinFast Did Not Prove That Lachmann Anticipates 43

d) The Asserted Patents Are Not Obvious 45

(i) Lachmann (Single-Reference Obviousness) 45

(ii) Lachmann And Cornette 45

(iii) Lachmann And Laurent 48

(iv) Secondary Considerations 48

e) Alleged Prior Art Hot-Stamping Processes 50

(i) Alleged Invalidity Based on Two Parameters 50

(ii) Alleged Invalidity Based on [redacted] 50

3. The Term "Layer" Is Definite under § 112 51

III. THE '227 PATENT 57

A. Infringement 57

B. Technical Domestic Industry 57

C. Validity 57

1. Priority Date of The Asserted Patents 57

2. The Asserted Patents Are Not Invalid 57

3. The Term "Layer" Is Definite under § 112 57

[redacted]

IV. ECONOMIC DOMESTIC INDUSTRY 57

A. ArcelorMittal Has Proven The Existence of A Domestic Industry under 19 U.S.C. § 1337(a)(3)(C), and VinFast Has No Legally Coherent Argument to The Contrary (Response to VFOpB § IV.B.5) 60

B. ArcelorMittal Has Proven The Existence of A Domestic Industry in Articles Protected by The Asserted Patents under Each of 19 U.S.C. § 1337(a)(3)(A) and 19 U.S.C. § 1337(a)(3)(B) (Response to VFOpB § IV.B) 62

1. The Record Shows Significant Investments for The DI Precursor Products (Response to VFOpB § IV.B.1) 64

a) VinFast Misapprehends The Law Regarding Economic Domestic Industry under § 1337(a)(1)(A) & (B) (Response to VFOpB § IV.B.1.i) 64

b) ArcelorMittal Has Linked The DI Precursor Products to The Tested DI Direct Products (Response to VFOpB § IV.B.1.ii) 69

(i) [redacted] 69

(ii) [redacted] 70

(iii) [redacted] 70

(iv) [redacted] 71

(v) [redacted] 72

(vi) [redacted] 72

(vii) [redacted]

c) VinFast Ignores the Evidence Linking the DI Precursor Products to the Asserted Patents (Response to VFOpB § IV.B.1.iii) 73

d) The Record Evidence Shows Quantitatively Significant Investments in DI Precursor Products (Response to VFOpB § IV.B.3) 75

[redacted]

(i) The Investments at Calvert Based on The DI Precursor Product Apportionment Method Are Significant 75

(ii) Even Accepting VinFast's Non-Representativeness Argument, The Investments in DI Precursor Products Are Still Significant 78

(iii) The Quantified Investments at Cleveland-Cliffs Further Show a Significant Domestic Industry 80

2. The Record Shows Significant Investments for The DI Direct Products (Response to IV.B.2, IV.B.4) 81

a) The Evidence Supports Apportioning Tier 1s' Investments Based on DI Precursor Products 81

b) The Subpoenaed Tier 1s' Investments in The DI Direct Products Are Significant Even if VinFast's Non-Representativeness Argument Is Credited 82

C. The Investments in The Domestic Industry Are Significant 86

V. VINFAST MOTION TO STRIKE 91

A. Calvert Investments 92

B. [redacted] 95

VI. REMEDY AND BONDING 96

A. Limited Exclusion Order 96

B. Cease and Desist Order 97

C. Bond 99

[redacted]

TABLE OF AUTHORITIES

Cases

Alexsam, Inc. v. IDT Corp.,
715 F.3d 1336 (Fed. Cir. 2013).....45

Anchor Wall Sys., Inc. v. Rockwood Retaining Walls, Inc.,
340 F.3d 1298 (Fed. Cir. 2003).....54

Broadcom Corp. v. Emulex Corp.,
732 F.3d 1325 (Fed. Cir. 2013).....8, 14

Brown v. Barbacid,
436 F.3d 1376 (Fed. Cir. 2006).....22

Burroughs Wellcome Co. v. Barr Lab'ys, Inc.,
40 F.3d 1223 (Fed. Cir. 1994).....19

Canon Comput. Sys., Inc. v. Nu-Kote Int'l, Inc.,
134 F.3d 1085 (Fed. Cir. 1998).....40

Certain Agric. Vehicles,
Inv. No. 337-TA-487, Comm'n Op., 2004 WL 2224033 (Sept. 24, 2004) 98

Certain Beverage Brewing Capsules,
Inv. No. 337-TA-929, Comm'n Determination, 2019 WL 10630509 (Feb. 1, 2019) 67, 72, 75

Certain Beverage Dispensing Sys.,
Inv. No. 337-TA-1130, Comm'n Determination, 2020 WL 8675357 (June 1, 2020) 88

Certain Biometric Scanning Devices,
Inv. No. 337-TA-720, Ord. No. 24, 2011 WL 1686363 (Feb. 16, 2011) 68, 78

Certain Carburetors & Prods.,
Inv. No. 337-TA-1123, Comm'n Op., 2019 WL 5622443 (Oct. 28, 2019).....87

Certain Comput. Network Sec. Equip. & Sys.,
Inv. No. 337-TA-1314, ID, 2023 WL 5744218 (Aug. 8, 2023) ..... *passim*

Certain Convertible Sofas,
Inv. No. 337-TA-1122, ID, 2019 WL 3315628 (July 12, 2019).....32

Certain Dental Implants,
Inv. No. 337-TA-934, Comm'n Op., 2016 WL 11603664 (May 11, 2016).....26

Certain Digit. Photo Frames & Image Display Devices,
Inv. No. 337-TA-807, Comm'n Op., 2013 WL 12447248, Comm'n Op. (Mar. 27, 2013) 100

Certain Digit. Video Receivers & Related Hardware & Software Components,
Inv. No. 337-TA-1103, ID, 2019 WL 2953269 (June 4, 2019) 97

Certain Dimmable Compact Fluorescent Lamps,
Inv. No. 337-TA-830, ID, 2013 WL 1491916 (Feb. 27, 2013) 29

Certain Disposable Vaporizer Devices,
Inv. No. 337-TA-1410, Ord. No. 28, 2024 WL 5378663 (Mar. 21, 2025).....61, 91

Certain Dynamic Sequential Gradient Compression Devices,
Inv. No. 337-TA-335, Comm'n Decision, 1992 WL 12668881 (Nov. 1, 1992) 62

Certain Elec. Devices, Including Mobile Phones, Portable Music Players, & Computs.,
Inv. No. 337-TA-701, Ord. No. 58, 2010 WL 5621540 (Nov. 18, 2010) 85

Certain Elec. Devices, Including Wireless Commc'n Devices, Portable Music & Data Processing Devices, & Tablet Computs.,
Inv. No. 337-TA-794, ID, 2012 WL 4752221 (Sept. 14, 2012) 87

Certain Elec. Devices with Image Processing Sys.,
Inv. No. 337-TA-724, ID, 2011 WL 3385131 (July 1, 2011).....33

Certain Elec. Devices with Image Processing Sys.,
Inv. No. 337-TA-724, Ord. No. 29, 2011 WL 1336531 (Mar. 11, 2011).....77

Certain Elec. Paper Towel Dispensing Devices,
Inv. No. 337-TA-718, Comm'n Op., 2012 WL 13210371 (Jan. 1, 2012) 100

Certain Filament Light-Emitting Diodes (II)
Inv. No. 337-TA-1220, ID, 2021 WL 6102808 (Nov. 19, 2021) 62, 87

Certain Integrated Repeaters, Switches, Transceivers, & Prods. Containing Same,
Inv. No. 337-TA-435, 2001 WL1769747 (July 19, 2001).....75

Certain Light-Based Physiological Measurement Devices,
Inv. No. 337-TA-1276, Comm'n Op. (Nov. 14, 2023).....97

Certain Lithium Metal Oxide Cathode Materials,
Inv. No. 337-TA-951, Comm'n Determination, 2019 WL 4010940 (June 1, 2019) 66

Certain Litium-Ion Battery Cells,
Inv. No. 337-TA-1181, Ord. No. 28, 2020 WL 7640098 (Nov. 23, 2020) 66

Certain Magnetic Data Storage Tapes & Cartridges,
Inv. No. 337-TA-1012, Comm'n Op., 2018 WL 8648372 (Apr. 2, 2018) 68, 78

Certain Magnetic Tape Cartridges,
Inv. No. 337-TA-1036, ID, 2018 WL 4634919 (Jan. 25, 2018).....62

Certain Male Prophylactic Devices,
Inv. No. 337-TA-546, Comm'n Determination, 2008 WL 2952724 ..... 88, 89

Certain Microlithographic Machs.,
Inv. No. 337-TA-468, ID, 2003 WL 1831891 (Jan. 29, 2003) 62

Certain Mobile Device Holders,
Inv. No. 337-TA-1028, Comm'n Op., 2018 WL 4042764 (Mar. 22, 2018) 85

Certain Outdoor & Semi-Outdoor Elec. Displays,
Inv. No. 337-TA-1331, ID, 2023 WL 8520564 (Nov. 13, 2023) 48

Certain Pick-Up Truck Folding Bed Cover Sys. (III)
Inv. No. 337-TA-1353, Ord. No. 33, 2024 WL 2106595 (Apr. 23, 2024) 100

Certain Power Inverters & Converters,
Inv. No. 337-TA-1267, RD at 8 (Aug. 26, 2022) 98

Certain Power Supply Controllers,
Inv. No. 337-TA-541, Comm'n Op., 2008 WL 2164194 (May 1, 2008) 100

Certain Semiconductor Chips Having Synchronous Dynamic Random Access Memory Controllers,
Inv. No. 337-TA-661, ID, 2010 WL 1695162 (Jan. 22, 2010) 24

Certain Stringed Musical Instruments,
Inv. No. 337-TA-586, Comm'n Op., 2009 WL 5134139 (May 16, 2008) 67, 91

Certain Table Saws Incorporating Active Injury Mitigation Tech.,
Inv. No. 337-TA-965, Comm'n Op., 2017 WL 1476193 (Feb. 1, 2017) 97

Certain Television Sets, Television Receivers, Television Tuners & Components Thereof,
Inv. No. 337-TA-910, Comm'n Op., 2015 WL 6755093 (Oct. 30, 2015) 61

Certain UMTS & LTE Cellular Commc'n Modules & Prods.,
Inv. No. 337-TA-1240, Final ID, 2022 WL 1315591 (Apr. 1, 2022) 65, 66

Certain UV Curable Coatings for Optical Fibers, Coated Optical Fibers,
Inv. No. 337-TA-1031, ID (Mar. 15, 2018) 77

Certain Woodworking Machs.,
Inv. No. 337-TA-174, Notice of Termination, 1987 WL 1564200 (May 1, 1987) 88

ClearOne, Inc. v. Shure Acquisition Holdings, Inc.,
35 F.4th 1345 (Fed. Cir. 2022) 55

Convolve, Inc. v. Compaq Comput. Corp.,
812 F.3d 1313 (Fed. Cir. 2016) 7, 14

Cooper v. Goldfarb,
154 F.3d 1321 (Fed. Cir. 1998).....23

Crown Packaging Tech., Inc. v. Belvac Prod. Mach., Inc.,
122 F.4th 919 (Fed. Cir. 2024) 19

Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.,
807 F.2d 955 (Fed. Cir. 1986).....27, 31

E.I. du Pont de Nemours & Co. v. Unifrax I LLC,
921 F.3d 1060 (Fed. Cir. 2019).....19, 21, 23

EcoServices, LLC v. Certified Aviation Servs., LLC,
830 F. App'x 634 (Fed. Cir. 2020) 6, 14

Finnigan Corp. v. Int'l Trade Comm'n,
180 F.3d 1354 (Fed. Cir. 1999).....33

Fleming v. Escort Inc.,
774 F.3d 1371 (Fed. Cir. 2014).....21, 23

Horizon Meds. LLC v. Alkem Lab'ys Ltd.,
503 F. Supp. 3d 118 (D. Del. 2020).....13

Howmedica Osteonics Corp. v. Wright Med. Tech., Inc.,
540 F.3d 1337 (Fed. Cir. 2008).....7, 14

Hyosung TNS Inc. v. ITC,
926 F.3d 1353 (Fed. Cir. 2019).....61

Intell. Ventures I LLC v. T-Mobile USA, Inc.,
902 F.3d 1372 (Fed. Cir. 2018).....6

Interactive Gift Express, Inc. v. Compuserve Inc.,
256 F.3d 1323 (Fed. Cir. 2001).....51

InterDigital Commc'ns, LLC v. Int'l Trade Comm'n,
707 F.3d 1295 (Fed. Cir. 2013).....62

Johnson Worldwide Assocs., Inc. v. Zebco Corp.,
175 F.3d 985 (Fed. Cir. 1999).....54

Kinetic Concepts, Inc. v. Smith & Nephew, Inc.,
688 F.3d 1342 (Fed. Cir. 2012).....45

Koninklijke Philips N.V. v. Zoll Med. Corp.,
656 F. App'x 504 (Fed. Cir. 2016) 26

Kyocera Wireless Corp. v. Int'l Trade Comm'n,
545 F.3d 1340 (Fed. Cir. 2008).....34

Lelo Inc. v. Int'l Trade Comm'n,
786 F.3d 879 (Fed. Cir. 2015).....86, 88, 89

In re Lister,
583 F.3d 1307 (Fed. Cir. 2009).....26

Mantissa Corp. v. First Financial Corp.,
No. 22-1963, 2024 WL 607717 (Fed. Cir. Feb. 14, 2024) 55

Martek Biosciences Corp. v. Nutrinova, Inc.,
579 F.3d 1363 (Fed. Cir. 2009).....12

Motorola Mobility, LLC v. Int'l Trade Comm'n,
737 F.3d 1345 (Fed. Cir. 2013)..... *passim*

Mytee Prods., Inc. v. Harris Rsch., Inc.,
439 F. App'x 882 (Fed. Cir. 2011) 45

NFC Tech., LLC v. Matal,
871 F.3d 1367 (Fed. Cir. 2017).....21

Niazi Licensing Corp. v. St. Jude Med. S.C., Inc.,
30 F.4th 1339 (Fed. Cir. 2022) 55

Orexo AB v. Sun Pharm. Indus. Ltd.,
No. 3:20-cv-12588 (GC) (DEA), 2023 WL 4492095 (D.N.J. June 30, 2023) 13

Orion IP, LLC v. Hyundai Motor Am.,
605 F.3d 967 (Fed. Cir. 2010).....41

Ortho-McNeil Pharm., Inc. v. Mylan Lab'ys, Inc.,
520 F.3d 1358 (Fed. Cir. 2008).....6

Personalized Media Commc'ns, LLC v. Int'l Trade Comm'n,
161 F.3d 696 (Fed. Cir. 1998).....55

Phillips v. AWH Corp.,
415 F.3d 1303 (Fed. Cir. 2005) (en banc).....51

ResQNet.com, Inc. v. Lansa, Inc.,
594 F.3d 860 (Fed. Cir. 2010).....26

Roton Barrier, Inc. v. Stanley Works,
79 F.3d 1112 (Fed. Cir. 1996).....7, 14

Sandt Tech., Ltd. v. Resco Metal & Plastics Corp.,
264 F.3d 1344 (Fed. Cir. 2001).....23

Sherwin-Williams Co. v. PPG Indus., Inc.,
No. CV 17-1023, 2020 WL 5077547 (W.D. Pa. Aug. 27, 2020) 27

Sonix Tech. Co. v. Publ'ns Int'l, Ltd.,
844 F.3d 1370 (Fed. Cir. 2017).....55

SunTiger, Inc. v. Sci. Rsch. Funding Grp.,
189 F.3d 1327 (Fed. Cir. 1999).....6, 8, 14

Vstream Techs., LLC v. PLR Holdings, LLC,
No. 6:15-cv-974-JRG-JDL, 2016 WL 6211550 (E.D. Tex. Sept. 27, 2016).....55

Wuhan Healthgen Biotechnology Corp. v. Int'l Trade Comm'n,
127 F.4th 1334 (Fed. Cir. 2025) 62

Zircon Corp. v. Int'l Trade Comm'n,
101 F.4th 817 (Fed. Cir. 2024) 68, 69

Statutes

19 U.S.C. § 1337(a)(3)..... *passim*

19 U.S.C. § 1337(d)(1) 96

35 U.S.C. § 102..... *passim*

35 U.S.C. § 102(b) 19

Rules

GR 7.1 94

GR 9.2 41

GR 11.6.3 93

GR 13.1 19

[redacted]

TABLE OF ABBREVIATIONS

Abbreviation	Description
'227	U.S. Patent No. 11,326,227
'602	U.S. Patent No. 10,961,602
AMOpB	ArcelorMittal's Opening Post-Hearing Brief
Al-coated steel	Aluminum or aluminum alloy coated steel
Appx	Appendix to Complainant ArcelorMittal's Post-Hearing Brief
AMPreHB	ArcelorMittal's Pre-Hearing Brief
Asserted Patents	U.S. Patent Nos. 10,961,602 and 11,326,227
ATS	Applied Technical Services, LLC
Autogen	Autogen Co., Ltd.
[redacted]	[redacted]
[redacted]	[redacted]
Cornette	Cornette et al., "High Strength Steels for Automotive Safety Parts," SAE Technical Paper Series 2001-01-0078 (2001)
[redacted]	[redacted]
CRM	Cold rolling mill
DI Direct Products	Licensed aluminized aluminum alloy-coated steel hot stamped in the United States that practices the Asserted Patents
DI Precursor Products	Al-coated steel products manufactured by Calvert and Cleveland-Cliffs
Engels	Engels et al., "Controlling and monitoring of the Hot-Stamping Process of Boron-Alloyed Heat-Treated Steels" (2006)
ER&D	Engineering, research, and development
[redacted]	[redacted]
GMW14400	GMW14400 Material Specification
[redacted]	[redacted]
Hein	Hein et al., "Hot Stamping of USIBOR 1500 P: Part and Process Analysis Based on Numerical Simulation" (2006)
[redacted]	[redacted]
IDS	Information Disclosure Statements
Lachmann	Carsten Lachmann, "Developments of High-Strength Sheet Steel Qualities and Joining Technology Aspects for Use in Automobiles" (2005)
Laurent	U.S. Patent No. 6,296,805
LEO	Limited exclusion order
[redacted]	[redacted]
Maki	Japanese Patent Publication No. JP/2004/244704
[redacted]	[redacted]
[redacted]	[redacted]
Nishibata US	U.S. Patent Publication No. 2006/0185774
Nishibata WO	International Publication No. 2004/106573

[redacted]

Abbreviation	Description
OEMs	Original equipment manufacturers
Passat 1049	2006 Volkswagen Passat VIN# WVWAK73C66P041049
PHS	Press hardened steel
POSITA	Person of ordinary skill in the art
PTO	United States Patent and Trademark Office
Secat	Secat, Inc.
[redacted]	[redacted]
[redacted]	[redacted]
SGS	Société Générale de Surveillance SA
Suehiro II	Suehiro et al., "Properties of Aluminum-Coated Steels for Hot-Forming" (2003)
Takagi	U.S. Patent Application Publication No. 2004/0009366
[redacted]	[redacted]
Vaissiere	Vaissiere et al., "Development of Pre-Coated Boron Steel for Applications on PSA Peugeot Citroën and RENAULT Bodies in White," SAE Technical Paper Series 2002-01-2048, reprinted from the Proceedings of the 2002 SAE International Body Engineering Conference and Automotive & Transportation Technology Conference (2002)
VFOpB	VinFast's Opening Post-Hearing Brief
VinFast Accused Products	The VF 8 and VF 9 models, as well as other imported VinFast models that use Al-coated steel parts similar to those in the VF 8 and VF 9
VFPreHB	VinFast's Pre-Hearing Brief

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TABLE OF EDIS DOCUMENTS

Name	EDIS Doc. ID No.
Complaint	818840
Procedural Schedule	825908
Joint Claim Construction Chart	836248
Joint Stipulation re Importation, Sale, and Inventory	836421
ArcelorMittal Pre-Hearing Brief (hereinafter "AMPreHB")	841781
Order No. 19	841799
VinFast Pre-Hearing Brief (hereinafter "VFPreHB")	842047
Joint Supplement to Joint Stipulation re Importation, Sale, and Inventory	844266
Order No. 31	845120
Corrected Order No. 26 (hereinafter "Order No. 26")	845250
VinFast Initial Post-Hearing Brief (hereinafter "VFOpB")	846801
ArcelorMittal Opening Post-Hearing Brief (hereinafter "AMOpB")	846815

[redacted]

TABLE OF ATTACHMENTS RELEVANT TO ARCELORMITTAL'S RESPONSE TO VINFAST'S MOTION TO STRIKE (§ V)

Name	No.
Excerpts from the Deposition of James Malackowski (Dec. 19, 2024)	CX-0015C
Excerpts from the Expert Report of James Malackowski (Nov. 25, 2024)	CX-0081C

[redacted]

I. INTRODUCTION

Though this case involves multiple issues (infringement, validity, and technical and economic domestic industry), the majority of VinFast's Opening Post-Hearing brief focuses on just one of those issues—validity. This is telling; VinFast knows it cannot reasonably challenge ArcelorMittal's substantial evidence of infringement and technical and economic domestic industry. Thus, as illustrated by VinFast's less than robust attention to these issues, ArcelorMittal's presentation stands largely uncontested. Even where it does attack, VinFast does so by ignoring significant parts of the record or misapplying the law. For example, as to infringement and technical domestic industry, VinFast continues to argue that ArcelorMittal's expert Dr. James Fekete relied on a single SEM to support his infringement and technical domestic industry opinions. VinFast's own counsel refuted this argument when he characterized ArcelorMittal's testing results as a "boxcar" of evidence, and even VinFast's expert had no choice but to agree that Dr. Fekete analyzed much more than a single SEM. For economic domestic industry, VinFast relies on a faulty legal premise—ArcelorMittal failed to disaggregate its investments. Notably, VinFast does not challenge ArcelorMittal's showing of qualitatively substantial investments in ER&D or ArcelorMittal's showing of quantitatively and qualitatively significant investments in plant and equipment and labor and capital.

Turning to validity, not once does VinFast acknowledge its clear and convincing burden. This is especially fatal, where like here, VinFast's burden is particularly heavy given that the same art relied on by VinFast was before the Patent Office.

VinFast also ignores that it must prove the relied-upon art is actually prior art. Here, VinFast either glosses over its obligation, or worse, for the Passat 1049, misrepresents ArcelorMittal's position by stating (incorrectly) that ArcelorMittal does not dispute the Passat's

[redacted]

prior art status. To the contrary, whether the Passat 1049 is prior art and the weight (none) that the uncorroborated hearsay evidence upon which VinFast relies should be given have been contested issues between the parties and subject to pre-hearing motion practice. There can be only one conclusion drawn from VinFast's election to ignore this—it has no answer. That VinFast ignores this foundational requirement does not make it disappear—VinFast's failure to address, much less prove, the prior art status of the art it relies upon infects its entire invalidity case.

VinFast's invalidity case falls far short of clear and convincing for many other reasons. For example, for the Passat 1049, VinFast's expert Dr. Brown did not use and analyze the same SEM for all limitations; instead, he mixed and matched different SEMs to meet limitations. This mix-and-match approach fails. As to the Lachmann grounds, VinFast again chose to ignore ArcelorMittal's substantial evidence that Lachmann is not enabling, despite the requirement that prior art must be enabling to invalidate. Recognizing Lachmann lacks all claim elements, VinFast also failed to show a motivation to combine with other art. These failures are fatal.

Aware that it cannot carry its burden, VinFast attempts to plug the holes in its invalidity case with things that were never presented at the hearing. For example, in its brief, VinFast asserts anticipation invalidity theories based on several other references (Cornette, Suehiro II, Takagi, Engels, and Hein); this was not presented at the hearing. To conjure up record evidence in support of these new theories, VinFast repeatedly mischaracterizes or outright misstates the record. These last-ditch efforts by VinFast should be rejected.

Comparing what VinFast argues to what is in the record—on ***all*** issues—it is clear that VinFast has no argument. Its products infringe, a robust domestic industry exists, and the patents are valid. Respectfully, ArcelorMittal requests that the ALJ find a violation by VinFast and issue an exclusion order and cease and desist order.

II. THE '602 PATENT

A. Infringement

1. The Tested VF 8 Parts Demonstrate Infringement by The VF 9

As ArcelorMittal explained in its opening brief, . AMOpB at 31–32 (citing RX-1245C, RX-1258C, CX-0315C, and CX-0316C). And contrary to VinFast's suggestion, the VFOpB at 7 n.1. Rather, these parts are all manufactured according to VinFast documents that exist to ensure uniform characteristics across the hot stamped VinFast parts. *See* Tr. (Fekete) at 499:10–502:16, 505:8–506:21. Indeed, the VinFast hot stamping specification states that its purpose is to RX-1258C.0002.[1] Similarly, VinFast witnesses confirmed that VinFast control plans and process flow diagrams reflect required part characteristics to "[2] CX-0017C (Kavamura) at 76:4–16; *see id.* at 79:6–11; CX-0019C (Prakash) at 99:17–100:4, 115:6–18. At bottom, VinFast fails to cite ***any*** documentary evidence contradicting this evidence. VFOpB at 7–8.

ArcelorMittal demonstrated infringement for . VinFast

[1] All emphases added throughout brief unless otherwise noted.

[2] While VinFast notes that *Cf.* VFOpB at 7.

[redacted]

does not dispute that all these parts were made according to VinFast's hot stamping specification, control plans, and process flow diagrams. *See* AMOpB §§ III.B, IV.B. Instead, VinFast argues that because the specifications do not expressly require the claimed four-layer structure, they have no weight. *Cf.* VFOpB at 7. This argument is a red herring. [redacted]. *See* Tr. (Fekete) at 505:8–506:21.

2. The VinFast Accused Products Have The Claimed Intermediate, Intermetallic and Superficial Layers

That VinFast continues to flippantly assert Dr. Fekete improperly relied on "single SEM images" to show infringement (VFOpB at 8–11), highlights that VinFast lacks any response to the overwhelming evidence of infringement. Tellingly, VinFast does not cite, and in fact wholly ignores, (1) Dr. Fekete's infringement testimony, (2) Dr. Brown's testimony on cross-examination, or (3) the 34 volumes of testing results that constituted, in VinFast's own words, a "boxcar" of data supporting Dr. Fekete's infringement analysis. *Id.* at 8–14; Tr. (VinFast) at 283:12–13 ("This is a boxcar."); Tr. (Brown) at 1003:8–12 (agreeing there was "a boxcar of testing evidence").

This "boxcar" of evidence not only demonstrated that Dr. Fekete's opinions relied on much more than "single SEM images," but also demonstrated that VinFast's argument is wholly disconnected from the patents, the law, and industry practice. When VinFast asserts that "Dr. Fekete did not spend any time at the hearing explaining to the ALJ where the four-layer structure is" (VFOpB at 11), it omits that Dr. Fekete explained ***repeatedly*** at the hearing his conclusion that what is shown in the SEM images of the tested parts ***are*** the claimed four-layer structure based on (1) the SEM images, (2) line scans, and (3) spot EDS data. Tr. (Fekete) at

[redacted]

469:9–14, 481:8–482:1, 512:22–513:22, 660:8–19, 719:8–720:22; AMOpB §§ III.B.1.d–f, IV.B.1.e (citing data compiled in Appx. ¶¶ 2–5, 10). Dr. Fekete considered this data as part of extensive test results collected by accredited testing labs following a detailed protocol that Dr. Fekete helped to prepare and approved before testing began. *See* CX-0826C–CX-0859C; CX-0092C; CX-0821; CX-0823; CX-0824; CX-0825; Tr. (Fekete) at 469:15–491:18; AMOpB § I.F. Following Dr. Fekete's presentation, Dr. Brown had no choice but to acknowledge that, to show the claimed four-layer structure, Dr. Fekete "evaluated, analyzed, and relied on SEM data, line scan data, and spot EDS data"—significantly more than single SEM images. Tr. (Brown) at 1004:18–1005:5; 1005:11–19. Dr. Brown also recognized that Dr. Fekete considered binders full of testing data containing "***numerous*** SEM[]" images, as well as lab reports that each contain more than one SEM image. *Id.* at 1002:14–1004:13. Both parties' technical experts' testimony and testing data indisputably confirm that VinFast's argument has no basis in the evidentiary record.

VinFast further grounds its criticism of Dr. Fekete's opinions on an erroneous assertion that a layer must be "homogeneous and continuous across an entire part." VFOpB at 9. But here again, VinFast turns a blind eye to what happened at the hearing: VinFast elicited no testimony from its own expert that the plain and ordinary meaning of "layer" requires that it be "homogeneous and continuous across an entire part." *See generally* Tr. (Brown) at 803:25–1021:15. Nor did Dr. Brown ever testify that the claimed layers must be homogeneous.[3] *See id.* Dr. Brown testified only that a layer must be continuous (*e.g.*, *id.* at 992:16–993:1), but on this point he had to acknowledge that evidence presented at the hearing forced him to recognize that a layer need ***not*** be continuous, resulting in him changing his interpretation of the term "layer"

[3] Dr. Brown's only testimony about homogeneity was with respect to the pre-coating ***prior*** to the hot stamping required to obtain the claimed invention. Tr. (Brown) at 970:2–22.

[redacted]

during the evidentiary hearing. *Id.* at 1014:12–1015:3; *see* AMOpB at 43.

Dr. Brown changed his interpretation for a good reason: there is no basis in the intrinsic evidence, industry practice, or case law for VinFast's proposed construction. VinFast's brief fails to point to any evidence in the patents that a layer must be "homogeneous and continuous across an entire part." VFOpB at 8–11; AMOpB at 34–35, 43–45. Dr. Brown recognized that "the claim wording . . . does ***not*** say that the layer has to be continuous," he further acknowledged that the specification does ***not*** "say that the required layers have to be continuous," and he could ***not*** ground his interpretation of the term "layer" in the prosecution history. Tr. (Brown) at 993:2–6, 993:18–994:1. Instead, a requirement that layers be continuous would render meaningless claim 2 of the '602 patent, which makes explicit that layers can be "***quasi*** continuous," and conflict with the specification's statement that layers can be "***essentially*** continuous." JX-0002 at cl. 2, 6:52–56; *Intell. Ventures I LLC v. T-Mobile USA, Inc.*, 902 F.3d 1372, 1378 (Fed. Cir. 2018); *Ortho-McNeil Pharm., Inc. v. Mylan Lab'ys, Inc.*, 520 F.3d 1358, 1362 (Fed. Cir. 2008); AMOpB at 43–45.

VinFast's argument that layers must be shown to be homogeneous and continuous across the entire part has no basis in law or industry practice. *See* AMOpB at 34–35. The law is clear that "[i]f a claim reads ***merely on a part*** of an accused device, that is enough for infringement." *SunTiger, Inc. v. Sci. Rsch. Funding Grp.,* 189 F.3d 1327, 1336 (Fed. Cir. 1999); *see EcoServices, LLC v. Certified Aviation Servs., LLC*, 830 F. App'x 634, 650 (Fed. Cir. 2020). Additionally, Dr. Fekete explained how industry practice, exemplified by VinFast's own testing documents, is to use only one sample per hot stamped component to measure coating characteristics. Tr. (Fekete) at 519:3–520:15 (discussing CX-0730.0001, 0003). Thus, VinFast's proposed construction is both legally foreclosed and at odds with how a POSITA would understand the term "layer."

Finding no support for its "homogeneous and continuous across an entire part" construction

[redacted]

in the intrinsic evidence, industry practice, or expert testimony, VinFast attempts to justify its construction only by citing to deposition testimony from Dr. Drillet that was taken out of context and simply repeated by Dr. Brown. VFOpB at 8–9. VinFast's attempt fails for multiple reasons. As an initial matter, Dr. Drillet's inventor testimony cannot be used to change the meaning of the claims. *Howmedica Osteonics Corp. v. Wright Med. Tech., Inc.*, 540 F.3d 1337, 1346 (Fed. Cir. 2008); *Convolve, Inc. v. Compaq Comput. Corp.*, 812 F.3d 1313, 1319 (Fed. Cir. 2016); *Roton Barrier, Inc. v. Stanley Works*, 79 F.3d 1112, 1126 (Fed. Cir. 1996); *see* AMOpB at 34–35.

Moreover, Dr. Drillet made clear at the hearing that a layer does ***not*** have to be either homogeneous or continuous. Specifically, Dr. Drillet testified that the kinetics of the interdiffusion of iron and aluminum during hot stamping results in the interdiffusion layer having a chemical "gradient," meaning that the interdiffusion layer is not homogeneous. Tr. (Drillet) at 145:6–146:1, 146:17–23. Dr. Drillet also explained how the patents' specification and Figure 1 reflect how the layers do not need to be continuous because when there is "10 precent of exigent phases at the surface," there is "no impact on the final properties." *Id.* at 146:24–147:21 (referring to CDX-0005C.53, showing JX-0002 at 6:52–56 and CX-0683C.0005); *see also id.* at 133:18–134:3 (referring to CDX-0005C.35 and confirming that the SEM image shown at CX-0683C.0005 was used in the patent as Figure 1). Dr. Fekete agreed with Dr. Drillet's reasoning for why the claimed layers are not homogeneous and need not be continuous. Tr. (Fekete) at 521:2–17.

VinFast also presents Dr. Drillet's deposition testimony wholly out of context. *Cf.* VFOpB at 8–10 (citing RX-1282C (Drillet) at 99:5–100:6, 76:23–77:24). At his deposition, Dr. Drillet was asked not about the patents but about an image (Figure 22) from a paper ("Cornette" (RX-0019)) and an image ("SEM Microstructures In BSE Mode," RX-0010 at RX-0010.0007) that Dr. Drillet had not previously seen. RX-1282C at 92:1–7; 68:21–22. Dr. Drillet was never asked to

[redacted]

compare these external images to the claim language but instead discussed the top two layers in the external images, the relationship between those layers, and how to distinguish a layer from a band of material. *E.g.*, *id.* at 99:5–100:6 (questioning whether "a band of intermetallic compound" is a layer or a phase). Fundamentally, Dr. Drillet was never asked at his deposition to provide a plain and ordinary meaning of the term "layer" as used in patents.

Thus, the overwhelming record evidence, intrinsic evidence, and Federal Circuit law refute both VinFast's single-SEM-image argument *and* VinFast's proposed construction on which its argument is premised. Dr. Bradley's test results, moreover, do not change the analysis; not only did Dr. Bradley test a small subset of the distinct parts (just four of 16) considered by Dr. Fekete, but Dr. Fekete's unrebutted conclusion that VinFast parts infringe at least in some places across the part is all that is necessary to show infringement. *See SunTiger*, 189 F.3d at 1336; *Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1333 (Fed. Cir. 2013); AMOpB at 36.

Finally, VinFast asserts that Dr. Raabe's analysis of the alleged Passat SEM, which showed horizontal cracking, undercuts Dr. Fekete's testing results on infringement. VFOpB at 11–14. This conclusory argument—unsupported by any expert analysis of the multitude of SEM images presented by Dr. Fekete on infringement (in contrast to the single Passat SEM presented by Dr. Brown)—fails. Indeed, *even if* VinFast's argument is correct (it is not, as explained below), VinFast only alleges a horizontal crack in [redacted] individual parts analyzed by Dr. Fekete—meaning that infringement of at least [redacted] parts tested by Dr. Fekete stands unchallenged. *See* VFOpB at 12–14 (citing 22 of 34 tested parts). Moreover, VinFast's "cracks" analysis is not the same as Dr. Raabe's. *See id.* at 11 (citing Tr. (Raabe) at 1054:10–1055:22). Dr. Raabe explained that "a horizontal feature" shown in the 2006 Passat SEM image could have interfered with the interdiffusion required by the patent claims. Tr. (Raabe) at 1179:16–1180:17. To understand

[redacted]

whether interdiffusion had occurred despite "this type of defect," he would need to know the "nature and composition" of the layers like the intermetallic layer. *Id.* at 1180:18–1181:1. Dr. Raabe further explained that VinFast did not provide that information for the sample of the 2006 Passat because the line scan that Drs. Brown and Bradley discussed was not from the SEM image showing the horizontal feature and therefore did not provide information about the layers shown in that SEM image. *Id.* at 1181:2–15 (CDX-0004C.58). Accordingly, it was ***both*** the presence of the horizontal feature ***and*** the absence of corresponding elemental composition data that suggested that an intermetallic layer may not have been formed in the 2006 Passat. *See* AMOpB at 83–84.

By merely including a string cite of various SEM images in CX-0100C, VinFast failed to show that the SEM images used by Dr. Fekete show any feature that may have disrupted interdiffusion, much less that the interdiffusion cannot otherwise be seen in corresponding elemental composition data. A review of the labs' testing data disproves VinFast's argument. As one example, VinFast points to the below image for part 6 as having a "horizontal crack":

CX-0100C at 6 ([redacted]); *see* VFOpB at 13 (citing CX-0100C at 6 ([redacted])). But examination of the lab testing report for part 6 ([redacted]) demonstrates that the feature in the middle of the SEM image did not interrupt the interdiffusion necessary to create the claimed four-layer structure. The report for part 6 ([redacted]) includes not just the above SEM image,

[redacted]

but also a line scan ("Linescan 3") that ran through the supposed "crack" shown in that image:

CX-0849C.0001 (square 3, coupon i). The line scan above clearly shows the claimed four-layer structure was formed regardless of the supposed crack because the four layers' distinct elemental compositions are visible:

CX-0849C.0001 (square 3, coupon i, Linescan 3, annotated); *see* Tr. (Fekete) at 481:8–482:1 (explaining line scan shows claimed four-layer structure). Dr. Fekete even cited to this line scan as part of his infringement analysis. CDX-0003C.99 (Fekete slide on claimed four-layer structure citing CX-0879C); CX-0879C.0014 (showing above line scan). Thus, Dr. Fekete's data confirms that the claimed four-layer structure is present regardless of the supposed "crack" that VinFast has identified. VinFast's mere conclusory assertion that "cracks" mitigate infringement is incorrect.

[redacted]

Neither at the hearing, nor in its post-hearing brief, does VinFast challenge the element-by-element analysis presented by Dr. Fekete for each Asserted Claim. Instead, as explained above, VinFast resorts to argument completely divorced from the evidence presented. ArcelorMittal did much more than show by a preponderance of the evidence that VinFast infringes—the evidence was overwhelming and, given VinFast's vacant response, stands unrebutted.

B. Technical Domestic Industry

1. The Subpoenaed Tier 1 Manufacturers Hot Stamp Practicing DI Direct Products, Including Tested and Non-Tested Products

As it did pre-hearing, VinFast attacks ArcelorMittal's alleged "representativeness analysis" related to technical domestic industry. VFOpB at 14–20. But their arguments fail now just as they did pre-hearing. The ALJ rejected VinFast's motion *in limine* in part because ArcelorMittal "neither use[d] the word 'representative' nor ma[de] any argument about representativeness" of the DI ***Precursor*** Products. Ord. No. 25 at 3. VinFast's argument regarding the DI ***Direct*** Products can be rejected for the same reason. ArcelorMittal's Pre-Hearing Brief and Opening Brief make no argument about the "representativeness" of the DI Direct Products or otherwise assert that certain products are "representative." *See* AMPreHB at 41–46; AMOpB at 42–48.

Hoping to paint a picture of infinite uncertainty, VinFast speculates—without citation—that "unknown millions" of DI Direct Products (VFOpB at 14) abound within the domestic industry.[4] Whether true or not, this unsupported picture is disconnected from ArcelorMittal's

[4] Even VinFast's assertion that [redacted] manufacture [redacted] (VFOpB at 14) is highly inflated because only Al alloy-coated steel with AS 150 coating weight can be hot stamped into a DI Direct Product. *See* AMOpB at 16–17; Tr. (Fekete) at 468:1–469:3, 544:5–13. [redacted] hot stamps [redacted] with AS 150 coating, not [redacted] as VinFast suggests. *Compare* Tr. (Fekete) at 673:2–14 (VinFast referring to CX-0341C as containing [redacted] products), *with* CX-0341C (showing [redacted] hot stamps [redacted] products with AS 150). Similarly, [redacted] hot stamps [redacted] with AS 150 coating, not [redacted] as VinFast stated. *Compare*

[redacted]

technical domestic industry. ArcelorMittal does not contend that "parts from subpoenaed Tier 1s are representative of parts manufactured by non-subpoenaed Tier 1 hot stampers." AMOpB at 48. Nor does ArcelorMittal rely on OEM specifications[5] to show "representativeness" or otherwise argue that ***all*** parts made by Tier 1 manufacturers hot stamping licensed Al alloy-coated steel practice the Asserted Patents—the [redacted] parts, which ArcelorMittal openly presented, demonstrate that manufacturing anomalies can occur. Tr. (Fekete) at 544:14–25. Rather, ArcelorMittal contends that the preponderance of the evidence—namely, deposition testimony from the subpoenaed Tier 1 manufacturers and results showing that the vast majority of tested parts practice the Asserted Patents—demonstrates that these Tier 1 manufacturers hot stamp Al alloy-coated steel parts that practice the patents, including both tested and non-tested parts. AMOpB at 46–48.

This conclusion stands unrebutted. While VinFast criticizes Dr. Fekete for not considering unavailable processing parameters (*cf.* VFOpB at 15–17), VinFast does not grapple with what is in the record: clear, consistent testimony from the subpoenaed Tier 1 hot stampers that they use the same hot stamping process for each part they manufacture. AMOpB at 47 (collecting citations). ArcelorMittal agrees with VinFast that "more than a dozen different process parameters impact the formation (or lack thereof) of the claimed layer structure." VFOpB at 15. Because parameters must be adjusted to obtain the claimed four-layer structure, it is unsurprising that the

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Tr. (Fekete) at 676:25–677:21 (VinFast referring to CX-0349C as containing [redacted] products), *with* CX-0349C ([redacted] showing [redacted] products with AlSi 150).

[5] ArcelorMittal does not contend the OEM specifications ***alone*** show that the DI Direct Products practice the Asserted Patents. But the OEM specifications (with the testimony from the Tier 1s) do support the conclusion that at least for the Tier 1s shown, through testing, to practice the Asserted Patents, those Tier 1s manufacture other parts that also practice the patents. Tr. (Fekete) at 538:25–540:7; CX-0638C; CX-0719C; *see, e.g.*, *Martek Biosciences Corp. v. Nutrinova, Inc.*, 579 F.3d 1363, 1372 (Fed. Cir. 2009) ("A patentee may prove infringement by 'any method of analysis that is probative of the fact of infringement' and circumstantial evidence may be sufficient.") (citations omitted).

[redacted]

Tier 1 manufacturers vary their process parameters on a product-by-product basis, as VinFast notes. *Cf. id.* at 17. As one hot stamper testified, the changes "are designed to get similar results." RX-1277C (Webb) at 195:14–196:3. If adjustments were not made, there would not be similar results. Tr. (Fekete) at 542:11–543:7. Thus, as ArcelorMittal explained in its opening brief, this testimony from the Tier 1 manufacturers, together with Dr. Fekete's testing results, reinforce that additional untested parts made by the subpoenaed Tier 1 manufacturers would practice the Asserted Patents. *See* AMOpB at 46–48 (citing *Orexo AB v. Sun Pharm. Indus. Ltd.*, No. 3:20-cv-12588 (GC) (DEA), 2023 WL 4492095, at *17 (D.N.J. June 30, 2023); *Horizon Meds. LLC v. Alkem Lab'ys Ltd.*, 503 F. Supp. 3d 118, 155 (D. Del. 2020)).

2. The DI Direct Products Have the Claimed Intermediate, Intermetallic and Superficial Layers

When considering the elements of the asserted claims, VinFast repeats the same tired and defective argument that Dr. Fekete relied solely on the comparison of a single SEM image to the Asserted Patents' Figure 1. *See* VFOpB at 20. ArcelorMittal need not repeat its response to this plainly desperate ***and erroneous*** argument, as even VinFast's own expert Dr. Brown had ultimately to concede. *See supra* § II.A.2.

VinFast's "single-SEM-image" argument is also divorced from the claims. VinFast premises the argument on an erroneous construction of a "layer" as necessarily "homogeneous and continuous across an entire part." *See* VFOpB at 21 (stating that an "isolated image" is insufficient to satisfy the "homogeneous and continuous across an entire part" construction). Dr. Brown's identification of "isolated islands" in certain of Dr. Fekete's SEM images, which VinFast repeats in its brief, was also part of a "discontinuity analysis" tied to this same flawed construction. Tr. (Brown) at 1015:7–16; *see* VFOpB at 21–26. As explained above, VinFast offers only attorney argument, which conflicts with the record evidence, to support its construction's "homogeneity"

[redacted]

requirement, while VinFast's "continuity" requirement finds no support in the intrinsic evidence, conflicts with the specification, and renders claim 2 of the '602 Patent meaningless. *See supra* § II.A.2. The evidence against a continuity requirement is so clear that Dr. Brown even explained that he was forced to change his interpretation ***during the evidentiary hearing*** to recognize that a layer need not be continuous. Tr. (Brown) at 1014:12–1015:3.

VinFast's argument that the claims' "layer" requirement demands evaluation of multiple SEM images "across an entire part" also conflicts with Federal Circuit authority and industry practice. *See supra* § II.A.2. "If a claim reads ***merely on a part*** of an accused device, that is enough for infringement." *SunTiger*, 189 F.3d at 1336; *see EcoServices*, 830 F. App'x at 650; *Broadcom*, 732 F.3d at 1333. VinFast's documents further make clear that industry practice is to use only one sample per hot-stamped component to evaluate coating characteristics like thickness. Tr. (Fekete) at 519:3–520:15 (discussing CX-0730.0001, 0003).

VinFast's attempt to justify its construction by citing deposition testimony from Dr. Drillet fails too. *See supra* § II.B.2. First, inventor testimony like that of Dr. Drillet cannot be used to change claim meaning. *Howmedica*, 540 F.3d at 1346; *Convolve*, 812 F.3d at 1319; *Roton*, 79 F.3d at 1126. Second, Dr. Drillet made clear at the hearing that a layer does ***not*** have to be either homogeneous or continuous. Tr. (Drillet) at 145:6–146:1, 146:17–147:21; *see also* Tr. (Fekete) at 521:2–17. Third, VinFast takes the cited testimony out of context; Dr. Drillet answered questions about images from documents that he had not previously seen; nor was he asked to compare the images to the claim language. RX-1282C (Drillet) at 68:21–22, 76:23–77:24, 92:1–7, 99:5–100:6.

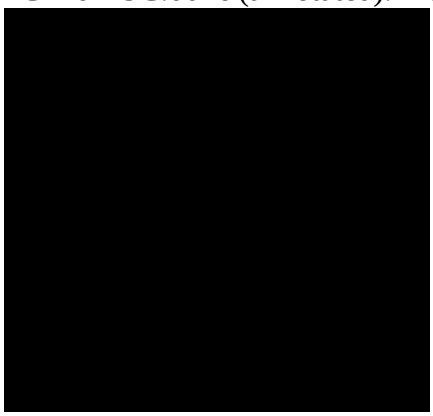
Lacking any support for its proposed construction, VinFast attempts to argue, for the first time, that the [redacted] references to a [redacted] in an SEM shows that layers must be "homogenous and continuous." VFOpB at 21–22. VinFast is

[redacted]

wrong: the [redacted] repeatedly states that the [redacted] are layers. For example, the image that VinFast cites says that the [redacted]

[redacted]

CX-0719C.0016 (annotated). Additionally, the previous page of the [redacted] expressly calls the [redacted] shown to the left (CX-0719C.0015). Contrary to VinFast's assertions, the [redacted] confirms that a POSITA would not require "layers" to be either continuous or homogeneous.



Thus, the overwhelming record evidence, intrinsic evidence, and Federal Circuit law refute VinFast's "single-SEM-image" argument, Dr. Brown's [redacted] argument, and the proposed construction on which those arguments are premised. Dr. Bradley's test results do not change the analysis. *Cf.* VFOpB at 26–28. Dr. Fekete's analysis—again, based on reams of data—shows the DI Direct Products practice the Asserted Patents. *See supra* § II.A.2.

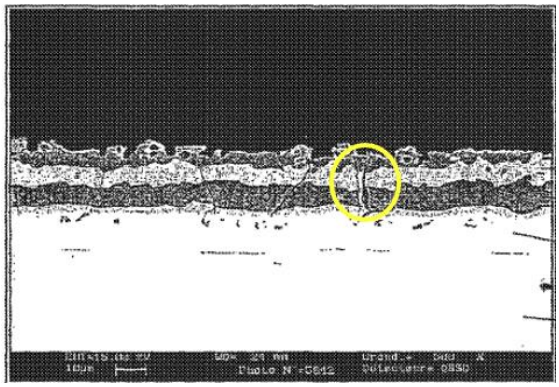
Finally, VinFast again makes the conclusory assertion, unsupported by any expert analysis of Dr. Fekete's testing results, that horizontal "cracks" negate Dr. Fekete's finding of the claimed

[redacted]

four-layer structure. *Cf.* VFOpB at 28–31. This argument fails for the same reasons as it does for infringement. *See supra* § II.A.2. Even if VinFast's argument was correct (it is not, as explained below), VinFast does not suggest that there is a horizontal "crack" in seven parts tested by Dr. Fekete, meaning that those parts still practice. VFOpB at 28–31 (citing only five of twelve tested parts). More fundamentally, as explained, it was ***both*** the presence of a horizontal feature ***and*** the absence of corresponding elemental composition data that suggested that an intermetallic layer may not have been formed in the 2006 Passat. Tr. (Raabe) at 1179:16–1181:15; AMOpB at 83–84. VinFast's string cite of various SEM images in CX-0109C and CX-0114C does not show that the SEM images used by Dr. Fekete show a feature that disrupted interdiffusion during manufacturing, much less that the SEM images lack corresponding elemental composition data. For example, VinFast points to the following images as each having a "horizontal crack":

[redacted]

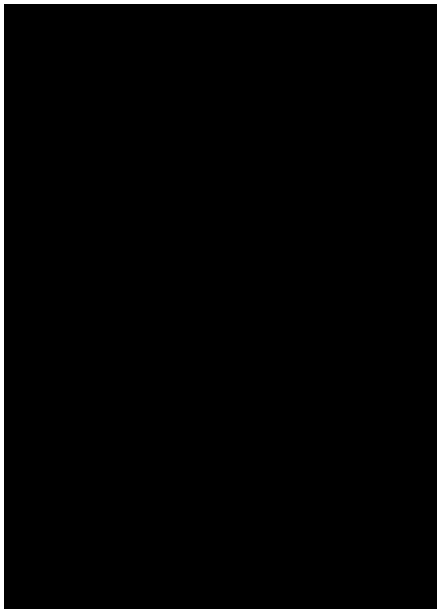
VFOpB at 29–30 (CX-0109C, CX-0114C). But these images do not show a "horizontal crack" at all—rather, they show ***vertical*** cracks extending from the surface that formed ***after*** hot stamping and that could not have disrupted the formation of the four-layer structure ***during*** interdiffusion. *See* Tr. (Brown) at 990:4–9 (agreeing "after hot-stamping, after manufacturing, vertical cracks can form in the coating" and that he would be "amazed" not to find such cracks). Indeed, Figure 1 of the Asserted Patents, which "illustrates a preferred embodiment," shows similar vertical cracks:



JX-0002 at 3:51–52, Fig. 1. For the last image from part [redacted], examination of the lab testing report for that part shows that the horizontal "features" did not interrupt interdiffusion or prevent the formation of the claimed four-layer structure. The report for part [redacted] includes not just the cited SEM image, but also a line scan ("Linescan 3") that ran through the supposed "crack":

CX-0878C.0001 (coupon i). The line scan above shows the claimed four-layer structure was

formed regardless of the supposed crack because the four layers' distinct elemental compositions are visible as shown below. CX-0878C.0001 (square 3, coupon i, Linescan 3, annotated); CX-0878C.0013; *see also* Tr. (Fekete) at 481:8–482:1 (explaining line scan shows claimed four-layer structure). Dr. Fekete even cited to this line scan as part of his technical domestic industry analysis. CDX-0003C.195 (Fekete slide on claimed four-layer structure citing CX-0880C); CX-0880C.0006 (showing same line scan as that at CX-0878C.0013). Thus, Dr. Fekete's data confirms that the claimed four-layer structure is present regardless of the supposed "crack" that VinFast has identified. VinFast's mere conclusory assertion that cracks mitigate technical domestic industry is incorrect.



C. Validity

1. Priority Date of The Asserted Patents

Beyond acknowledging—correctly—that ArcelorMittal contends that the Asserted Patents are entitled to a priority date of December 2005, VinFast misstates ArcelorMittal's presentation and evidence supporting that date as the proper priority date of the Asserted Patents. Contrary to VinFast's argument, ArcelorMittal does not rely on the evidence identified by VinFast to corroborate ***conception*** (VFOpB at 32); rather, that evidence corroborates ***diligence*** from the December 2005 conception to the filing of the original application in October 2006.

As demonstrated during the hearing, and established with the ArcelorMittal "TAV" research report and Dr. Drillet's and Mr. Kefferstein's testimony, Dr. Drillet and his co-inventors worked with hot stamper , which performed hot stamping of a CX-0683C; Tr. (Drillet) at 129:16–134:10; 159:2–160:25; 169:19–22, 170:11–172:2. It was after

[redacted]

ArcelorMittal's analysis of that hot-stamped [redacted], as reflected in the ArcelorMittal "TAV" research report, that the inventors recognized that they had the last puzzle piece of the process window that would reliably and repeatedly yield the desired four-layer coating and ultra-high strength base steel. Tr. (Drillet) at 169:19–22, 170:11–172:2; *see also* CX-0011C (Kefferstein) at 15:21–16:7, 16:14–20, 19:19–23. Thus, the ArcelorMittal "TAV" research report on the hot-stamped [redacted] manufactured according to ArcelorMittal's instructions, which VinFast has conceded practices the claims (VFPreHB at 31; Tr. (Opening) at 44:23–45:9; VFOpB at 33–34), along with Dr. Drillet's and Mr. Kefferstein's testimony, is more than sufficient to establish conception by December 2005. CX-0683C; Tr. (Drillet) at 129:16–134:10; 169:19–22, 170:11–172:2; CX-0011C (Kefferstein) at 15:21–16:7, 16:14–20, 19:19–23; *see E.I. du Pont de Nemours & Co. v. Unifrax I LLC*, 921 F.3d 1060, 1077 (Fed. Cir. 2019) (finding conception where there was "corroborative evidence . . . supporting the credibility of the inventors' story" and "no evidence that contradicts or calls the credibility of the inventors' testimony into question"). It was at this point that the inventors had "a definite and permanent idea of the complete and operative invention, as it [was] hereafter to be applied in practice." *Burroughs Wellcome Co. v. Barr Lab'ys, Inc.*, 40 F.3d 1223, 1227–28 (Fed. Cir. 1994).

Rather than address this key piece of documentary evidence that corroborates conception, VinFast contends, in a footnote, that arguments regarding conception based on "ArcelorMittal allegedly having provided [redacted]" have been waived "as not raised in the pre-hearing brief." VFOpB at 34 n.2.[6] To the contrary, in its pre-hearing brief, ArcelorMittal

[6] Despite knowing about the ArcelorMittal "TAV" research report since before Dr. Drillet's deposition ***and*** asking both Dr. Drillet and Mr. Ronald Kefferstein about it during their depositions, VinFast never asserted an invalidity theory based on the on-sale bar—not in its contentions, not in its pre-hearing brief, and not during the hearing. VinFast's arguments regarding an alleged "on-sale bar issue," raised for the first time in the post-hearing brief, are thus waived. VFOpB at 34

[redacted]

stated exactly what the evidence presented at the hearing established:

> Dr. Drillet will explain that by December 2005, the inventors tested that their conceived invention was possible, as exemplified by the hot-stamped steel [redacted] part. CX-0683. The named inventors, therefore, conceived of their invention no later than December 2005.

AMPreHB at 66. The argument was raised in ArcelorMittal's pre-hearing brief, and ArcelorMittal also presented this evidence throughout the hearing without any objection by VinFast. CX-0683C; Tr. (Drillet) at 129:16–134:10; 169:19–22, 170:11–172:2. VinFast also cross-examined Dr. Drillet about this evidence. Tr. (Drillet) at 158:18–168:14; VFOpB at 33–34 (citing same).

Turning to the evidence that VinFast does address in its post-hearing brief—(1) [redacted] [redacted] (2) redacted communications with counsel; and (3) redacted communications involving the inventors (VFOpB at 32), as noted—ArcelorMittal relies upon this evidence to support ***diligence***. Thus, VinFast's arguments that the evidence post-dates the December 2005 conception date are exactly the point, as diligence follows conception.

As to the work by Ms. Grigor'eva, VinFast's only issue with the document is that [redacted]. VinFast argues that because [redacted] hot stamped the [redacted], the [redacted] of the SEM of the [redacted] in Ms. Grigor'eva's work cannot be "credited" as evidence of conception. VFOpB at 33–34. Notably, VinFast does not cite a single case in support of its argument. Moreover, as explained above, Dr. Drillet testified—including in response to questions asked during cross-examination—that [redacted] hot stamped the part pursuant to ArcelorMittal's advice, meaning that it was the inventors at

n.2; GR 13.1. Moreover, the on-sale bar only applies to activities in the United States, and it is undisputed this activity occurred in Europe. 35 U.S.C. § 102(b); *Crown Packaging Tech., Inc. v. Belvac Prod. Mach., Inc.*, 122 F.4th 919, 924 (Fed. Cir. 2024) ("The statute requires that … the offer for sale must have been 'in this country.'"); *see also* AMOpB at 55–63.

[redacted]

ArcelorMittal who first conceived of the claimed invention.

Regarding the redacted communications, VinFast argues that they do not provide any information as to the content and thus should be discounted. VFOpB at 34–35. But, again, ArcelorMittal does not rely on these documents for content, only to show that from December 2005 until the application filing in October 2006, the inventors diligently worked with patent counsel. In its challenge, moreover, VinFast overstates the standard for corroboration. The proper standard, referred to as the "rule of reason" analysis, has "no particular formula" and "applies to the evaluation of all pertinent evidence." *E.I. du Pont*, 921 F.3d at 1076–77. "[T]he evidence 'must be considered as a whole, not individually,'" and "the goal of the analysis is to determine 'whether the inventor's story is credible.'" *NFC Tech., LLC v. Matal*, 871 F.3d 1367, 1371–72 (Fed. Cir. 2017) (citations omitted). Importantly, the Federal Circuit has rejected a "demanding" standard for corroboration; instead, "[i]t is a flexible, rule-of-reason demand for independent evidence that, as a whole, makes credible the testimony of the purported prior inventor with regard to conception and reduction to practice of the invention as claimed." *Fleming v. Escort Inc.*, 774 F.3d 1371, 1377 (Fed. Cir. 2014). VinFast has not challenged that these documents, in fact, are between the inventors and their patent counsel or that the documents pertain to preparation of the patent application. Dr. Drillet and Mr. Kefferstein testified that they met with patent attorneys immediately following the analysis of the [redacted] and continued to meet with them up until the patent application was filed. Tr. (Drillet) at 134:4–10, 138:25–142:1; CX-0011C (Kefferstein) at 15:21–16:7, 16:14–20, 19:19–23, 49:2–50:12, 51:1–9, 51:16–52:5; CX-0895C.0001; CX-0897C; CX-0896C; CX-0894C; CX-0892C. These documents make that testimony more credible. *Fleming*, 774 F.3d at 1377.

As to diligence, VinFast's only challenge—which spans a mere paragraph of its 181-page

[redacted]

brief—is that the documents presented were too redacted to "provide any meaningful corroboration" of diligence. VFOpB at 35–36. This argument fails because VinFast once again relies on a heightened standard for corroborating evidence. *Brown v. Barbacid*, 436 F.3d 1376, 1380 (Fed. Cir. 2006) (recognizing diligence may be shown by attorney's work in preparing the patent application). And, as explained, the evidence corroborates the testimony of Dr. Drillet and Mr. Kefferstein that the inventors worked continuously with patent attorneys from December 2005 until the application was filed in October 2006. Moreover, in connection with diligence, VinFast does not address Ms. Grigor'eva's "Plan," which details extensive work by ArcelorMittal, including a [redacted]. CX-0890C; CX-0891C (identifying Raisa Grigor'eva as have an internship ("[s]tage") "du 01/03/2006 au 31/08/2006"); Tr. (Drillet) at 140:18–141:9, 168:18–169:7. Taken as a whole, the evidence is more than sufficient to establish diligence.

Lastly, VinFast contends that ArcelorMittal waived an "actual reduction to practice." VFOpB at 36. Again, as noted above, in its pre-hearing brief, ArcelorMittal explained that the evidence would establish the inventors "tested that their conceived invention was possible" (*i.e.*, an actual reduction to practice) by December 2005. AMPreHB at 64–65. As Dr. Drillet explained, ArcelorMittal worked with the hot stampers to [redacted] Tr. (Drillet) at 129:16–134:10, 159:21–160:25, 169:19–22, 170:11–172:2; *see also* CX-0011C (Kefferstein) at 15:21–16:7, 16:14–20, 19:19–23. ArcelorMittal gave the hot stamper [redacted] advice on [redacted] Tr. (Drillet) at 129:16–134:10, 159:23–160:25, 169:19–22, 170:11–172:2. As part of this analysis, the

[redacted]

inventors discovered "the last part of the puzzle" for defining the process window that would result in the desired microstructure. *Id.*at 170:11–172:2. Despite VinFast's unsupported contention that expert testimony is required to establish an actual reduction to practice, "the law requires ***only*** that the corroborative evidence, including circumstantial evidence, support the credibility of the inventors' story." *E.I. du Pont*, 921 F.3d at 1077; *Fleming*, 774 F.3d at 1377; *see also Cooper v. Goldfarb*, 154 F.3d 1321, 1330 (Fed. Cir. 1998) ("[A]n actual reduction to practice does not require corroboration for every factual issue contested by the parties."). Moreover, "[d]ocumentary or physical evidence that is made contemporaneously with the inventive process," like that presented here, "provides the ***most reliable proof*** that the inventor's testimony has been corroborated." *Sandt Tech., Ltd. v. Resco Metal & Plastics Corp.*, 264 F.3d 1344, 1350–51 (Fed. Cir. 2001).

Applying the proper "rule of reason" standard, the inventors' testimony, in conjunction with the contemporaneous documentary evidence discussed at the hearing, including the ArcelorMittal "TAV" research report, is more than sufficient to establish that the inventors both conceived of and actually reduced to practice the invention by December 2005. *Fleming*, 774 F.3d at 1376–77 (finding inventor testimony along with documentary evidence such as notes, correspondence from the inventor, and a letter from a third party who was interested in the idea provided sufficient evidence of conception and reduction to practice). Alternatively, the evidence also establishes that conception occurred no later than December 2005, and the inventors thereafter diligently worked to protect their invention through the filing of their patent application (*i.e.*, constructive reduction to practice).

2. The Asserted Patents Are Not Invalid

VinFast would have the ALJ believe that, through its expert, it presented a straightforward invalidity case based on the Passat 1049, Lachmann, and Domestic Industry. Not so, and hearings exist for a reason: live witness testimony, and particularly cross-examination, reveals much. At

[redacted]

the hearing, ArcelorMittal showed that VinFast built its invalidity case on overstatements, sleight of hand, lack of evidentiary and legal support, and complete ignorance of its clear and convincing burden.[7] In its Opening Statement, VinFast promised much, asserting "[t]he case is over with the Passat, Your Honor, and the evidence on this is absolutely compelling." Tr. (VinFast Opening) at 53:13–14. But VinFast's post-hearing brief now asserts a shotgun approach to invalidity, demonstrating VinFast's lack of confidence in the invalidity theories presented at the hearing.

As detailed below, VinFast mischaracterizes the evidence and relies on unsubstantiated attorney argument in a failed effort to maintain its invalidity challenges. Illustrative of how little VinFast believes in what it tried to present at the hearing, VinFast now asserts a single-reference obviousness theory based on Lachmann even though it never presented such a theory at the hearing and has no expert testimony, or any other evidence, to support it. Instead, VinFast repeatedly asserts for each limitation the naked legal conclusion that, "[t]o the extent Lachmann does not expressly disclose each of the limitations sufficient to show anticipation under § 102, any modifications would be obvious to a POSITA." VFOpB at 95–96, 140–42. A party secure in its hearing presentation would not resort to such unsubstantiated, last-ditch efforts.

As another example of VinFast's failing invalidity case, at the hearing, VinFast's expert never presented an anticipation invalidity theory based on Cornette, Suehiro II, Takagi, Engels, or Hein. Yet, citing to Dr. Brown's testimony, VinFast alleges that these references separately disclosed "***the claimed*** 4-layer structure." VFOpB at 38–50. But Dr. Brown never testified that

[7] At the hearing, ArcelorMittal explained how VinFast did not address its clear and convincing burden to prove invalidity in its pre-hearing brief. Tr. (ArcelorMittal Opening) at 34:24–35:4. Remarkably, VinFast's post-hearing brief not only omits the burden, but attempts to flip the burden by marking essentially all limitations as undisputed to mask that VinFast failed to meet its heavy burden. The burden is "particularly heavy" when, as here, the same prior art was before the Patent Office. *Certain Semiconductor Chips Having Synchronous Dynamic Random Access Memory Controllers*, Inv. No. 337-TA-661, ID, 2010 WL 1695162, at *30 (Jan. 22, 2010).

[redacted]

any of these references disclosed the claimed invention. Tr. (Brown) at 826:1–832:13. VinFast's mischaracterizations speak volumes of the significant problems with VinFast's invalidity theories. VinFast's mischaracterizations and unsubstantiated, new invalidity arguments confirm that VinFast's invalidity case lacks merit, and certainly fails the clear and convincing standard.

a) Overview of The Alleged Prior Art

VinFast's main invalidity theories based on the Passat 1049, Lachmann, and Domestic Industry rely on mischaracterizations about (1) the references themselves, (2) the testimony about the references, and (3) the alleged state of the art and prior art. The apparent implication being that, because the prior art was allegedly ubiquitous, the problems with VinFast's invalidity theories can simply be overlooked. Not so. VinFast's attempts to distract from the problems with its main invalidity theories simply demonstrate their fatal flaws.

(i) Multiple Alleged Prior Art References Do Not Qualify as Printed Publications Because VinFast Failed to Show That They Were Publicly Accessible

For many of its alleged prior art and state of the art references, VinFast failed to show that the references are actually prior art. Vaissiere, Suehiro II, Engels, and Hein are non-patent literature, but VinFast has no evidence they were publicly accessible before the critical date, and thus no evidence they qualify as printed publications under 35 U.S.C. § 102.[8] In its Opening Brief, VinFast relies on these references to allege what knowledge a POSITA would have in evaluating or combining VinFast's main invalidity references. The absence of clear and convincing evidence that these references were publicly available—*i.e.,* known—to a POSITA incurably infects VinFast's invalidity theories. This alone dooms VinFast.

[8] VinFast's failure to show the prior art status of its main invalidity references (Passat 1049 and Lachmann) are described separately below. *Infra* § II.C.2.b.i and § II.C.2.c.i.

[redacted]

To qualify as a printed publication under § 102, "the key inquiry is whether the reference was made sufficiently accessible to the public interested in the art before the critical date." *Koninklijke Philips N.V. v. Zoll Med. Corp.*, 656 F. App'x 504, 529 (Fed. Cir. 2016) (citation and internal quotations omitted); *see also In re Lister*, 583 F.3d 1307, 1311 (Fed. Cir. 2009). For example, "evidence of indexing or cataloguing, which, while not prerequisites, serve as hallmarks of public accessibility." *Koninklijke Philips N.V.*, 656 F. App'x at 529.

Here, VinFast did not provide any evidence, let alone clear and convincing evidence, that Vaissiere, Suehiro II, Engels, and Hein were publicly accessible before the critical date.[9] *Certain Dental Implants*, Inv. No. 337-TA-934, Comm'n Op., 2016 WL 11603664, at *15 (May 11, 2016) ("A party challenging the validity of a patent based on a printed publication must prove facts showing that the publication qualifies as prior art under § 102 by clear and convincing evidence."). Instead, for each, VinFast relied only on the date found on the face of the reference to argue that they qualify as prior art. VFOpB at 41 (Vaissiere), 44 (Suehiro II), 48 (Engels), 50 (Hein). This does not show public accessibility. *Certain Dental Implants*, 2016 WL 11603664, at *18 ("[T]he mere existence of a printed date is insufficient to establish that the document was publicly accessible as of that date . . . . It takes more for a defendant to satisfy the burden of establishing invalidity by clear and convincing evidence."). Indeed, VinFast knows the law demands more because it provided more for Cornette. VFOpB at 40 (explaining publicly accessibility of Cornette). For example, Dr. Raabe testified that Suehiro II is an internal document. Tr. (Raabe) at 1038:9–17. Thus, Vaissiere, Suehiro II, Engels, and Hein do not qualify as prior art references

[9] VinFast cannot rely on the inclusion (well-after the critical date) of these references in IDS's to the PTO to argue they are prior art. The Federal Circuit has held that a patentee "d[oes] not convert [references] into printed publication prior art by including them with the IDS submitted to the PTO." *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 866 (Fed. Cir. 2010).

[redacted]

and cannot be the basis for any "state of the art" knowledge.

VinFast's failure to show these references are prior art thus dooms its main invalidity theories. VinFast inextricably intertwines Vaissiere, Suehiro II, Engels, and Hein with how a POSITA would allegedly interpret the Passat 1049, Lachmann, and the so-called Domestic Industry invalidity theories. *E.g.*, VFOpB at 72 (citing Hein (RX-0013)), 92 (citing Vaissiere (RX-0081)); Tr. (Brown) at 931:4–14. It is axiomatic that an invalidity opinion must be based on ***prior*** art. *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986) ("The [POSITA] is a hypothetical person who is presumed to be aware of all the pertinent prior art."); *Sherwin-Williams Co. v. PPG Indus., Inc.*, No. CV 17-1023, 2020 WL 5077547, at *2 (W.D. Pa. Aug. 27, 2020) (excluding opinions because "[non-prior art is] not relevant to the knowledge of a POSITA on the priority date of the Asserted Patents"). VinFast's failure to prove by clear and convincing evidence that these references qualify as prior art means they cannot be used to show the knowledge of a POSITA, and Dr. Brown's invalidity opinions irreparably infected.

(ii) VinFast Grossly Distorts The Testimony to Assert That Several References Disclose The Asserted Claims

Setting aside VinFast's failure to show public availability, VinFast grossly mischaracterizes the testimony about Cornette, Suehiro II, Takagi, Engels, and Hein to inaccurately argue that they anticipate the Asserted Claims.[10] First, Dr. Brown could not and did not testify that any of these references anticipate. Second, because VinFast presented no evidence that these references anticipate, VinFast provided no limitation-by-limitation mapping for anticipation as required. AMOpB at 103–104 (citing cases). Third, VinFast's assertion that Dr. Brown testified that these references disclosed the claimed four layers is a mischaracterization.

[10] VinFast did not even preserve an anticipation theory based on Suehiro II, Takagi, or Hein in its pre-hearing brief. VFOpB at 52–110.

[redacted]

The below table compares VinFast's (mis)characterization of Dr. Brown's testimony and his actual testimony and shows Dr. Brown did not testify about the ***claims***.

VinFast's Post-Hearing Brief	Hearing Transcript
"Cornette, a technical paper titled 'High Strength Steels for Automotive Safety Parts,' ***discloses*** the processing conditions for hot stamping of USIBOR 1500 and ***the claimed 4-layer structure***. Hr'g Tr. (Brown) at 826:1–6." VFOpB at 38.	"This is the SAE paper from 2001, with Cornette as the first author, showing processing conditions for the Usibor 1500, published by Usinor, showing ***their*** labeled four-layer structure." Tr. (Brown) at 826:3–6.
"[Suehiro II] is a technical paper titled 'Properties of Aluminum-Coated Steels for Hot-Forming' and ***describes*** the processing conditions for hot stamping of USIBOR 1500 and ***the claimed 4-layer structure***. Hr'g Tr. (Brown) at 828:16–829:22." VFOpB at 42.	"Then the image on the right describes the resulting microstructure, and I would describe it as ***a*** four-layer microstructure after being heated at 950 Celsius for 30 seconds." Tr. (Brown) at 829:19–22.
"Takagi ***discloses*** the processing conditions for hot stamping of aluminum alloy coated steel and ***the claimed 4-layer structure***. Hr'g Tr. (Brown) at 829:23–830:11." VFOpB at 44.	"Then, again, he describes ***a*** multi-layer structure resulting from that process." Tr. (Brown) at 830:10–11.
"Engels is a conference paper from the 'New Developments in Sheet Metal Forming Technology' conference, which ***discloses*** the general process parameters for hot stamping of aluminum alloy coated steel and ***the claimed 4-layer structure***. Hr'g Tr. (Brown) at 830:12–832:5." VFOpB at 46.	"He describes five layers. Layer number 2 is so thin it's unmeasurable, but he describes ***a*** layered structure. The image below is not a very good quality micrograph of that coating." Tr. (Brown) at 832:2–5.
"Hein, like Engels, is a conference paper from the 'New Developments in Sheet Metal Forming Technology' conference held in May 2006, and ***discloses*** hot stamping of USIBOR 1500 and ***the claimed 4-layer structure***. Hr'g Tr. (Brown) at 832:6-13." VFOpB at 49.	"In that publication, there is, again, a presentation of ***a*** four-layer structure." Tr. (Brown) at 832:12–13.

Thus, contrary to VinFast's Brief, Dr. Brown never stated that any of these references disclosed ***the claimed*** four-layer structure. Dr. Brown testified only that these references disclose ***a*** four-layer, or multi-layer, or layered structure generally. A generic multi-layer structure differs from, and does not meet the requirements of, the 4-layer structure ***claimed*** in the Asserted Claims.

(iii) VinFast's Unsupported Attorney Argument Does Not Accurately Describe the References

Even setting aside the above issues with VinFast's treatment of Cornette, Vaissiere,

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Suehiro II, Takagi, Engels, and Hein, VinFast's characterization of the disclosures in these references relies predominantly on unsupported attorney argument. For these references, VinFast follows the same pattern: a first paragraph with a citation to Dr. Brown's testimony, an end paragraph with a citation to Dr. Brown's testimony, and then, sandwiched between, a purported substantive discussion of the disclosures of these references devoid of any citation to Dr. Brown (or any other expert). *E.g.*, VFOpB at 42–44. VinFast's unsupported attorney argument purporting to characterize the disclosures of these references must be given no weight. *Certain Dimmable Compact Fluorescent Lamps*, Inv. No. 337-TA-830, ID, 2013 WL 1491916, at *20 (Feb. 27, 2013) ("[The] arguments are unsupported attorney argument that I cannot properly consider.").

VinFast begins its description of the prior art with the unremarkable observation that USIBOR 1500 and hot stamping existed before the Asserted Patents. VFOpB at 36–38. No one disputes this basic proposition. But from this premise, VinFast erroneously portrays the *claimed invention* as ubiquitous in the prior art, despite the invention being more than just hot stamped USIBOR. Nor does VinFast show that any prior hot-stamped products performed nearly as well as the claimed invention—that is, VinFast cannot dispute that the claimed invention offered material *improvements* over prior hot-stamped product. While VinFast asserts that prior publications described the general benefits of hot-stamped precoated steel, VFOpB at 36–37, VinFast offers no evidence whatsoever that any prior hot-stamped steel described in these publications performed equal to, much less ***better than***, the claimed invention. Tellingly, Dr. Brown never testified how the claimed invention's benefits and performance compared to that featured in any products described in any supposed prior publication. *See infra* § II.C.2.d.iv.

Moreover, VinFast attempts to say that hot stamping was widely used by car manufacturers, which even if true, does not prove anything (as generic hot stamping, even of

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aluminum coated steel, is insufficient to meet the Asserted Claims). Regardless, none of VinFast's evidence supports its argument. For example, VinFast implies that 60,000 tons of steel is substantial, VFOpB at 37, but Dr. Raabe explained this number is extremely small. Tr. (Raabe) at 1146:1–1147:3 (1.9 billion tons of steel is produced per year). VinFast suggests that Volkswagen was using the process disclosed in Lachmann (RX-0062) (VFOpB at 37), but Dr. Brown never testified to that. Rather, Dr. Brown conceded there is no evidence at all that the method disclosed in Lachmann was used by Volkswagen for its car parts. Tr. (Brown) at 956:15–957:15.

Similarly, VinFast's reliance on Takagi (RX-0104) and Vaissiere (RX-0081) is misplaced. Although Takagi is assigned to Nissan Motors, there is no evidence that Nissan ever implemented the process in Takagi. Likewise, Vaissiere discusses the primitive development of hot stamping processes that are markedly different than the claimed invention.[11] Finally, VinFast emphasizes a 2015 ArcelorMittal presentation describing the history of hot stamping. VFOpB at 37; CX-0565C.0001 (August 31, 2015). That presentation ([redacted]) is consistent with Dr. Drillet's testimony. As he testified, by 2004, he was working to increase USIBOR 1500 sales. Tr. (Drillet) at 103:25–104:4. Nowhere does that presentation or any document show any prior use or disclosure ***of the Asserted Claims***—VinFast simply ignores that generic hot stamping of even USIBOR is not sufficient to result in the claimed invention.

In sum, contrary to VinFast's argument, neither sale nor use of USIBOR 1500, nor hot stamping USIBOR 1500, nor even including hot stamped USIBOR 1500 in cars, necessarily practices the Asserted Patents. Simply hot stamping USIBOR is insufficient in and of itself to result in the Asserted Claims. Tr. (Drillet) at 119:13–15, 173:7–15.

[11] For example, for the Renault, Usibor was being discussed at the time in the context of the bumper beam. RX-0081.0009–10. But, as Dr. Drillet explained, bumper beams embodied very different coating requirements because they were not spot welded. Tr. (Drillet) at 150:7–151:3.

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Lastly, VinFast's attorney argument also fails to consider each reference in its entirety but instead selectively quotes from and intentionally omits other portions of the references:

Cornette: Contrary to VinFast's attorney argument, Dr. Raabe testified that the disclosures in Cornette are "very high-level" and only show a "very general description of [a hot stamping] process." Tr. (Raabe) at 1037:3–13; *see also id.* at 1063:13–1064:14. For example, Cornette does not provide any compositional information. *Id.* at 1037:14–16. Cornette further expressly states that "mechanical properties after hot forming process are not guaranteed by Usinor." Tr. (Raabe) at 1063:13–1064:14. Given this, a POSITA would not trust the properties described in Cornette and would have understood that a lot more needs to be studied. *Id.*

Vaissiere: VinFast's attorney argument ignores, that just like Cornette, Vaissiere provides only a general textbook description of hot stamping. Tr. (Raabe) at 1037:17–1038:4.

Suehiro II: VinFast selectively omits key disclosures from Suehiro II, which shows Suehiro II is far-removed from the Asserted Claims. For example, VinFast excerpted Figure 12 from Suehiro II, but omitted that Figure 12 has a post-hot stamp coating thickness that is significantly *less* than required by the Asserted Claims. Tr. (Raabe) at 1038:24–1039:9.

Takagi: VinFast's attorney argument fails to address two key disclosures of Takagi. First, Takagi concedes that the formation of the layered microstructure was not fully known. Tr. (Brown) 959:17–960:21; RX-0104 at [0019]. Takagi also does not disclose a post-hot stamping coating thickness of greater than 30 micrometers. Tr. (Raabe) at 1039:10–19.

Engels: VinFast's attorney argument omits key disclosures from Engels. Engels does not provide any values for the various hot-stamping parameters used to generate Engels' Figure 5. Tr. (Raabe) at 1040:7–1041:5. In addition, the Asserted Claims are directed to layer formation, while Engels describes "[f]ive phases." RX-0063.0014. As Drs. Raabe and Drillet testified, a "phase"

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is very different than a "layer." Tr. (Raabe) at 1041:6–18; RX-1282C (Drillet) at 97:14–98:13.

Hein: VinFast's approach to Hein is no different. For example, Hein does not disclose the chemical compositions of any layers or provide information about how to arrive at the microstructure depicted in Hein. Tr. (Raabe) 1041:19–1042:8.

Lachmann and Laurent: These references are discussed below in the context of VinFast's limitation by limitation mappings. *See infra* § II.2.c and § II.2.d.

b) The Passat 1049 Does Not Anticipate

(i) VinFast Did Not Prove That The Passat 1049 Is Prior Art

VinFast's post-hearing brief confirms that the entirety of its evidence regarding whether the Passat 1049 is prior art consists of the unreliable and uncorroborated Carfax Hearsay. VFOpB at 68–70. This is insufficient to prove by clear and convincing evidence that the Passat 1049 predates the critical date. AMOpB at 67–74. Despite overt challenges to the prior art status of the Passat—*e.g.*, Tr. (Arcelor Opening) at 35:24–36:8; Tr. (VinFast Opening) at 52:17–53:1; Ord. No. 26—remarkably and without citation, VinFast asserts that "ArcelorMittal does not dispute the prior art status of the 2006 VW Passat." VFOpB at 70. That VinFast would make such a representation calls into serious question all its arguments regarding the Passat.

VinFast's silence on the lack of prior art status of the Passat is multi-faceted: VinFast did not address its heavy burden of clear and convincing evidence. VFOpB at 69–70. It did not address its burden to demonstrate that the Carfax Hearsay is reliable, because it cannot. *Id.*; *Certain Convertible Sofas*, Inv. No. 337-TA-1122, ID, 2019 WL 3315628, at *14 (July 12, 2019) (refusing to credit evidence as reliable when "the record contains no indicia that Sauder's hearsay evidence is reliable"). The only evidence about the reliability, or more accurately the lack thereof, of the Carfax Hearsay is the warnings and disclaimers contained in the document, which repeatedly disclaim any responsibility regarding the accuracy of its contents. AMOpB at 68 (citing RX-

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0059.0001, 0009). VinFast did not claim, because it cannot, that it presented any evidence at the hearing showing that these disclaimers could be disregarded. VinFast's failure to show Carfax is reliable means it should be given no weight. AMOpB at 69 (citing *Certain Elec. Devices with Image Processing Sys.*, Inv. No. 337-TA-724, ID, 2011 WL 3385131, at *14 (July 1, 2011)).

The Carfax Hearsay should also be given no weight for the separate and independent reason that VinFast did not even attempt to corroborate the Carfax Hearsay. VinFast has no percipient witness testimony or corroborating evidence for this hearsay. In the context of invalidating a patent by clear and convincing evidence, the Federal Circuit has made clear that uncorroborated hearsay, no matter how credible, is insufficient as a matter of law to establish that a reference is prior art. AMOpB at 69 (citing *Finnigan Corp. v. Int'l Trade Comm'n*, 180 F.3d 1354, 1367, 1370 (Fed. Cir. 1999)). Here, there are two levels of hearsay: the Carfax Hearsay and the unidentified sources that supposedly provided information about events that occurred approximately 20 years ago and are allegedly reflected in the Carfax Hearsay. VinFast provided no corroborating evidence about what allegedly occurred in 2005 regarding the Passat 1049. Thus, VinFast failed to prove by clear and convincing evidence that Passat 1049 is prior art. AMOpB at 69–73.

VinFast also cannot rely on Dr. Brown to overcome the aforementioned problems with the Carfax Hearsay. As VinFast's citations to the transcript reflect, Dr. Brown merely repeated the contents of the Carfax Hearsay without adding any analysis. VFOpB at 70 (citing Tr. (Brown) at 835:7–13). VinFast also did not show that metallurgists would rely on Carfax. Thus, VinFast cannot use Dr. Brown as a backdoor for the Carfax Hearsay. AMOpB at 73–74.

(ii) VinFast Cannot Save Its Unreliable Testing Methodology by Unsupported Attorney Argument

VinFast did not demonstrate that its testing methodology was scientifically reliable. AMOpB at 75–77. VinFast did not explain why its selective, after-the-fact picking of certain

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coupons to test, together with its unexplained reporting of only a subset set of the test results, constitutes a reliable methodology. VFOpB at 69–70. Instead, VinFast offers—again—unsupported assertions and misleading statements. For example, VinFast described Roush Industries, the entity that extracted the Passat 1049 coupons, as "reputable." VFOpB at 69. But the cited evidence does not describe Roush's reputation. Tr. (Bradley) at 752:15–17; RX-0085.0002; RPX-0001. Similarly, VinFast misleadingly asserts that Dr. Brown "confirmed that the box [that Roush sent] contained the 2006 VW Passat coupons as extracted by Roush." VFOpB at 71. Dr. Brown did not receive the coupons "as extracted by Roush," because, as Dr. Brown admitted, he did not receive coupons BL6, BL8, BLV 1, BLV 2, BLV 3, BLV 4, or BLV 5. AMOpB at 75–77. VinFast also did not address Dr. Raabe's unrebutted testimony that the testing protocol employed by VinFast was inadequate. Tr. (Raabe) at 1044:6–1045:13. VinFast has not shown its testing methodology is reliable and it should be given no weight.

(iii) VinFast Did Not Prove The Passat 1049 Anticipates

VinFast's post-hearing brief confirms that it improperly mixed and matched different samples and/or sections of samples in a failed effort to show the Passat 1049 anticipates the claims.[12] For each of the independent claims (and further again for various dependent claims),

[12] VinFast's brief shows that its anticipation theory is separately flawed for relying on multiple references to prove anticipation. VFOpB at 71–74 ("substantial evidence further shows that the B-pillar of the 2006 Volkswagen Passat made use of pre-coated hot stamped steel" and citing CX-0565C, RX-0008, RX-0013, and RX-0062). Anticipation must be based on a ***single*** reference. *Kyocera Wireless Corp. v. Int'l Trade Comm'n*, 545 F.3d 1340, 1351 (Fed. Cir. 2008) (no anticipation because "collection of eleven separate GSM specifications . . . do not together constitute a single reference for § 102 purposes"). VinFast also does not explain how references, which only discuss the Passat generally, relate to the specific Passat 1049 model being asserted. For example, VinFast relies on a slide that says "MAJOR break-through" but that slide is about a 2004 Passat and not about a 2006 Passat. CX-565C.0009. Similarly, the alleged 2006 Passat Service Training Word document is about a European, not American, Passat. RX-0008.0001 (license plate). Hein, meanwhile, does not specify a model year. RX-0013.0005. As to Lachmann,

[redacted]

VinFast did not use and analyze the ***same*** SEM images for all limitations, contrary to the requirements of anticipation. AMOpB at 78–82 (citing cases).

A particularly egregious example of Dr. Brown's incorrect mixing and matching relates to dependent claims 8 and 11 of the '227 Patent. Tellingly, in its brief, VinFast avoids identifying which coupons were tested for which claim limitations. As ArcelorMittal explained, Dr. Brown used results from Dr. Bradley's various analyses of coupon BL1 for independent claim 1 of the '227 Patent. AMOpB at 81–82. Nothing in VinFast's brief refutes this. As a result, for claim [1j], Dr. Brown relied on the measurements annotated on the SEM below on the left.

Limitation [1j]	**Claim 8**
[redacted] VFOpB at 124 (citing [VFOpB at 81–82] analyzing '602 patent claim 1 limitation [1g]).	[redacted] VFOpB at 126–27 (RDX-002C.101 (reproducing Dr. Bradley's thickness analysis of RX-0174 at RDX-004C.26)).

However, for claim 8 of the '227 Patent, which depends on claim 1, Dr. Brown used a table with the measurements depicted above on the right. As shown, those numbers are ***completely different*** than the numbers relating to the SEM on the left. That is because Dr. Brown used Dr. Bradley's results from the analysis of a ***completely different*** **SEM**. Indeed, VinFast's brief cites

there is no evidence that it discusses the hot-stamping process for the Passat 1049. Tr. (Brown) 957:15–24.

[redacted]

to RX-0174 at RDX-004C.26, which is depicted below. The SEMs are different because one SEM (show above) is from BL1 while another SEM (shown below using RDX-004C.26) is from BL5.

This was not a mistake by Dr. Brown, but an intentional switching of coupons because the measurements for BL1 do ***not*** satisfy claim 8, which requires that the "interdiffusion layer has a thickness that is greater than a thickness of intermediate layer." Dr. Brown could not show that this is true for BL1, so he switched to BL5. This is not allowed. AMOpB at 78–82 (citing cases).

And Dr. Brown's mixing and matching persists throughout the claims. For example, Dr. Brown used test results from *different sections* of the Passat sample for his analysis for limitations [1a] and [1b] of the '602 Patent. For limitation [1a], he used the image on the left taken from one part of the Passat sample, while for limitation [1b], he used the elemental composition scan on the right, ***which is <u>taken from a different section of the Passat sample</u>***.

[redacted]

	(reproducing Dr. Bradley's elemental composition line profile of the 2006 VW Passat B-pillar coupon generated from the EDS measurement data RX-0173 at RDX-004C.28)).

Thus, Dr. Brown relies on the elemental scan on the right to show alleged interdiffusion in the left SEM, but the elemental scan on the right was ***not taken from the same section*** of the Passat sample as the SEM on the left. As RDX-004C.28 shows below, the elemental scan above is taken from a completely different microstructure. In other words, Dr. Brown took an SEM from one section of the Passat sample to show an interdiffused microstructure but relies on scanning a different area and microstructure of aluminum coating to show elemental composition. Tr. (Brown) at 952:9–955:5 (Dr. Brown cannot say whether the line scan came from the same section).

RDX-004C.28. This same mix-and-match problems persist throughout the remaining limitations of claim 1. For example, for claim [1c], Dr. Brown relies on these measurements:

[redacted]

VFOpB at 77 (citing "RDX-002C.[62] (annotating RX-0086 and excerpting Dr. Bradley's EDS analysis of RX-0173 at RDX-004C.27)"). The measurements in the bottom table, however, are not based on the SEM immediately above it. Instead, they are based on the elemental line scan, which, as shown above, was taken from a different part of the Passat sample. AMOpB at 78–82. Likewise, for [1g], Dr. Brown takes the measurement of coating thickness from RX-0086, VFOpB at 81–82, but does not take the measurement of the coating thickness from RX-0173, which contains the SEM on which the elemental line scan was derived. Dr. Brown repeated the incorrect mixing and matching for claims 21 and 24 of the '602 Patent and claim 1 of the '227 Patent. VFOpB at 85–86, 122–24; Tr. (Brown) at 952:9–955:5.

In addition to the independent claims, VinFast's brief confirms that Dr. Brown incorrectly mixed and matched different sections of the sample for claims 3, 4, 7, and 8 of the '602 Patent and claims 16 and 17 of the '227 Patent. For these claims, Dr. Brown relies on RX-0087.0002, which is an analysis of sample coupon BL7, a completely different coupon than that used for the independent claims. AMOpB at 80–81. As noted above, VinFast's brief tellingly did not mention which sample coupons were used for which analysis. As ArcelorMittal explained, Dr. Brown used

[redacted]

results from Dr. Bradley's analysis of the various parts of BL1 for the independent claims. *Id*. However, for claims 3, 4, 7, and 8 of the '602 Patent and claims 16 and 17 of the '227 Patent, Dr. Bradley used BL7 without any explanation of why he changed coupons. *Id*.

(iv) VinFast Did Not Show That The Passat Meets the Claimed Compositional Layers

As ArcelorMittal explained, Dr. Bradley failed to follow a reliable methodology to delineate layers in his elemental line scans. AMOpB at 82–84. This has two fatal consequences. First, it means Dr. Brown's compositional measurements are inaccurate. *Id*. Second, Dr. Brown's elemental composition does not indicate the Passat 1049 has a superficial (*i.e.,* surface) layer because there is a layer *above* the fourth layer. *Id*. VinFast fails to address any of these issues, both of which ArcelorMittal raised at the hearing.

VinFast also did not show that the Passat 1049 anticipates the recited intermediate layer and intermetallic layer limitations of the independent claims. AMOpB at 83–84. Dr. Raabe testified that the presence of a horizontal feature (i.e., the horizontal gap or separation of material formed above the diffusion layer) means that interdiffusion would have been impacted, such that an SEM, by itself, cannot indicate whether the requisite intermetallic layer would have formed. AMOpB at 83–84; Tr. (Raabe) at 1054:4–1055:22, 1179:15–1181:15.[13] Thus, elemental scans or additional compositional data are needed. Critically—*and dispositive here*—neither VinFast nor Dr. Brown contradict, rebut, or respond to Dr. Raabe's testimony, which remains uncontroverted. Thus, as a matter of metallurgical chemistry, VinFast failed to show the required layer formation.

Tellingly, VinFast did not provide any additional data or elemental scan on the actual Passat sample section imaged in RX-0086 (the SEM with the horizontal separation, which VinFast

[13] Notably, VinFast did not cite all of Dr. Raabe's testimony about the impact of the horizontal feature. VFOpB at 79 (citing Tr. (Raabe) at 1054:10-1055:22 and omitting 1179:15–1181:15).

[redacted]

relies on as ***its only*** "evidence" of a diffusion-based layered structure required for anticipation). As explained above, VinFast instead performed an elemental line scan on a *different area* of the Passat samples, as evidenced by the SEM corresponding to that line scan, *see* RDX-004C.28, which looks nothing like the SEM for the sample section shown in RX-0086 (the section with its horizontal separation feature, which VinFast relies on for other elements of the '602 and '227 Patents). VFOpB at 80 (RDX-002C.64 (annotating RX-0086 and excerpting Dr. Bradley's EDS analysis of RX-0173 at RDX-004C.27)).

Nor does VinFast ever reconcile these different pictures and data sets taken from different areas of coating. Instead, VinFast deflects to ArcelorMittal's infringement and technical domestic industry analysis, mischaracterizing them as being based on a "single SEM." This is wrong; Dr. Fekete relied on more for his opinions. *See supra* § II.A.2; Tr. (Brown) at 1001:2–1005:19.[14]

c) Lachmann Does Not Anticipate

(i) VinFast Did Not Prove Lachmann Is Prior Art

VinFast failed to prove by clear and convincing evidence that Lachmann is prior art to the Asserted Patents. AMOpB at 84–86. VinFast's only argument that Lachmann is prior art is that allegedly it was presented "by Dr. Carsten Lachmann of Volkswagen in a lecture on January 18, 2005." VFOpB at 51–52 (citing Tr. (Brown) at 877:18–878:3; RX-0005.0002; RX-0062.0002). There are at least two problems with VinFast's theory and evidence of alleged public accessibility.

[14] VinFast complains that Dr. Raabe chose not to test the Passat. VFOpB at 74. But VinFast, not ArcelorMittal, has the burden to show by clear and convincing evidence that the claims are invalid. VinFast's analysis and testing were so deficient that it failed to meet its burden and there was no need for Dr. Raabe to do his own testing. *Canon Comput. Sys., Inc. v. Nu-Kote Int'l, Inc.*, 134 F.3d 1085, 1088 (Fed. Cir. 1998) ("Ultimately, at trial on the merits, [the patentee] need only submit sufficient evidence to rebut any proof of invalidity offered by [the challenger]. Thus, where the challenger fails to identify any persuasive evidence of invalidity, the very existence of the patent satisfies the patentee's burden on the validity issue.").

[redacted]

First, VinFast's theory of public accessibility relies solely on a declaration made in September 2014, nearly 10 years *after* the alleged date of the lecture, that purports to remember the contents of specific slides from a presentation that allegedly occurred in January 2005. VFOpB at 51–52 (relying on RX-0005.0002 and RX-0062.0062). VinFast offered no explanation for how someone could remember or why they would remember the contents of specific presentation slides nearly 10 years after they were supposedly presented. AMOpB at 84–85 (VinFast took no discovery nor communicated with the declarant; indications on Lachmann are also inconsistent with a January 2005 presentation date). And second, because VinFast has failed to show public accessibility, it has also failed to prove that Lachmann was "disseminated or otherwise made accessible to [a POSITA]." *Orion IP, LLC v. Hyundai Motor Am.*, 605 F.3d 967, 974 (Fed. Cir. 2010); AMOpB at 85–86. This is a critical element of public accessibility.

(ii) VinFast Did Not Prove Lachmann Is Enabled

VinFast recognized that ArcelorMittal disputed whether Lachmann's disclosure is enabling. VFOpB at 87. Yet VinFast's brief did not address whether Lachmann is enabled. VinFast has no theory of enablement, and ArcelorMittal's evidence at the hearing stands unrebutted: The evidence shows that Lachmann was not enabling, and indeed, VinFast's arguments throughout its post-hearing brief confirm this point.[15]

Prior art must be enabling to invalidate a claim. AMOpB at 86–88. The unrebutted evidence is that a skilled artisan would not have been able to make the claimed invention from what Lachmann discloses without undue experimentation. *Id*. at 88–90. The unrebutted evidence shows that hot stamping is incredibly complex with many different parameters, but Lachmann

[15] In fact, VinFast has never articulated or provided notice of any enablement theory for Lachmann in its pre-hearing brief. To the extent VinFast attempts to do so in its reply brief, such a newly disclosed theory should be stricken. *See* GR 9.2.

[redacted]

discloses only one parameter (oven temperature range), and that alone is insufficient to arrive at the claimed invention without undue experimentation. *Id.*

VinFast's post-hearing brief confirms as much. *E.g.*, VFOpB at 15–17. VinFast affirmatively cites Drs. Raabe's and Drillet's testimony about the complexity of the hot-stamping process and the more than a dozen parameters involved:

> Dr. Raabe testified, more than a dozen different process parameters impact the formation (or lack thereof) of the claimed layer structure and listed several on a demonstrative. CDX-0004C.15; Hr'g Tr. (Raabe) at 1032:8-17, 1078:8-1079:22. This testimony was consistent with that of the inventor, Dr. Drillet. At the hearing, Dr. Drillet testified that one of the process parameters, heating rate, is "key in this case." Hr'g Tr. (Drillet) at 125:25-126:2. Dr. Drillet also presented a nearly identical set of processing parameters that impact the formation (or lack thereof) of the claimed layers[.] Dr. Drillet also testified that hot stamping does not always result in the development of the claimed structure.

Id. at 15–16 (demonstrative excerpts omitted). VinFast further cited Dr. Drillet's testimony to explain how important the parameters are to making the claimed invention. *Id.* at 16–17 (citing and quoting RX-1282C.0008 (Drillet)). For example, VinFast relies on Dr. Drillet's testimony that "[w]ithout knowing the heating rate, the thickness, and the furnace type, you cannot predict whether a part will have a stratified layer structure at the end of the furnace step[.]" *Id.* at 16 (quoting RX-1282C.0008 (Drillet) at 32:19–33:35). VinFast also relies on Dr. Drillet's testimony that temperature of the oven and/or time in the oven is insufficient to make the claimed invention because, for example, that does not provide any information about the heating rate. *Id.* at 16–17 (quoting RX-1282C.0008 (Drillet) 114:2–16 ("Q. So the invention is defining the process in a repeatable, robust way to generate the microstructure? A. Yes. Q. Part spend in the furnace. Right? A. With only the time and temperature that the aluminum-coated substrate will spend in the furnace, you would not be able to generate the four layers. Q. You also need to know the heating rate. Right? A. That's the key parameter.")).

Remarkably, VinFast all but concedes Lachmann's disclosure is not enabling in its attempt

[redacted]

to justify why a POSITA would be motivated to combine Lachmann with Cornette. According to VinFast, a motivation exists because Lachmann "discloses heat treatment at 'temperatures between 900 °C and 950 °C' ***but does not*** disclose specific values for some other parameters" and as a result, a "POSITA would have recognized that these specific numerical values would be useful for experimenting." VFOpB at 97 (quoting RX-0062). VinFast's purported motivation to combine explains exactly why Lachmann's disclosure is insufficient to make the claimed invention—it lacks any guidance on numerous parameters. Indeed, VinFast presented no evidence that a POSITA would have even appreciated a relationship between the four-layer coating and the multitude of hot-stamping parameters such that they would have been motivated to modify an existing process. At bottom, there is no dispute about the lack of disclosure in Lachmann.

The unrebutted testimony also shows that it would take undue experimentation to create the claimed invention from Lachmann's insufficient disclosures. AMOpB at 89–90 (citing Drs. Brown, Raabe, and Drillet). The only suggestion by VinFast, anywhere in its post-hearing brief, that experimentation would be routine is not in the context of enablement, but unsupported attorney argument in the context of why a modification of Cornette and Laurent would be routine for two dependent claims. VFOpB at 98 (citing Tr. (Brown) at 814:1–14, 888:23–889:10). But VinFast's citation to Dr. Brown does not support its attorney argument. Dr. Brown states only that experimentation would be required; he never characterizes or describes the amount of experimentation in any way, let alone describing it as "routine." *See* Tr. (Brown) 888:23–889:10, 814:1–14. As a result, the only evidence shows that undue experimentation would have been required, and thus, Lachmann is not enabling.

(iii) VinFast Did Not Prove That Lachmann Anticipates

A **Independent Claims**

Just like the Passat 1049, VinFast's post-hearing brief confirms that VinFast improperly

[redacted]

mixed and matched different SEM images in a failed attempt to show anticipation. For each independent claim, VinFast did ***not*** use and analyze the same SEM for all limitations, contrary to the requirements of anticipation. AMOpB at 90–92.

Instead, VinFast used two different SEM images to address the independent claims. *Id.*; VFOpB at 89–91. Using claim 1 of the '602 Patent as an example, VinFast uses an SEM located at RX-0062.0007 for limitations [1b], [1c], [1d], [1e], and [1f]. VFOpB at 89–90 (showing RDX-002.117 and RDX-002.118, which contains excerpts of RX-0062.0007). But for limitation [1g], VinFast uses a completely different SEM from RX-0062.0005. *Id.* at 90–91 (showing RDX-002.119, which contains an excerpt of RX-0062.0005). VinFast has no evidence that these different SEM images came from the same section of a sample, nor could they, as these SEM images are facially different. VinFast never explained and proved why Dr. Brown could mix and match two different SEM images to show anticipation. Dr. Brown did the same mixing and matching for all asserted independent claims. *Id.* at 93–95, 131–133. Because mixing and matching is not allowed for anticipation, VinFast has not shown that Lachmann anticipates.

B Dependent Claims 3 and 4 of The '602 Patent and Claims 16 and 17 of The '227 Patent

VinFast's post-hearing brief confirms it failed to show that claims 3 and 4 of the '602 Patent are anticipated even through its mixing and matching. AMOpB at 92–94; VFOpB at 92. The parties agree that Lachmann does not expressly recite the components of the base steel as required by claims 3 and 4 of the '602 Patent. AMOpB at 92–94; VFOpB at 92. But VinFast did not prove that Lachmann inherently discloses the specific requirements of the limitations. AMOpB at 92–94; VFOpB at 92. Instead, VinFast's post-hearing brief relies on the same flawed evidence and unsupported analytical leaps that ArcelorMittal addressed in its opening brief.

VinFast also does not make any argument related to claims 16 and 17 of the '227 Patent

[redacted]

and has abandoned its contention that claims 16 and 17 of the '227 Patent are anticipated. VFOpB at 131–140 (asserting anticipation only for "claims 1, 2, 7-11, 13, 15 and 24 of the '227 patent").

d) The Asserted Patents Are Not Obvious

(i) Lachmann (Single-Reference Obviousness)

VinFast did not present a single-reference obviousness theory at the hearing. Reflecting the lack of evidence, VinFast's post-hearing brief copies the same conclusory attorney argument for each limitation of each Asserted Claim: "To the extent Lachmann does not expressly disclose each of the limitations sufficient to show anticipation under § 102, any modifications would be obvious to a POSITA." VFOpB at 95–96, 140–142. Unsupported attorney argument does not prove that Lachmann renders obvious the class, much less by clear and convincing evidence.

Obviousness requires determining the scope and content of the prior art and determining the differences between the claimed invention and the prior art. *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1360 (Fed. Cir. 2012). VinFast did not explain what it contends is missing from Lachmann and why any modification would be obvious. VFOpB at 95–96, 140–142. Just as problematic, VinFast has no expert testimony or evidence indicating that any modification would be obvious. *Certain Comput. Network Sec. Equip. & Sys.*, Inv. No. 337-TA-1314, ID, 2023 WL 5744218, at *55 (Aug. 8, 2023); *Alexsam, Inc. v. IDT Corp.*, 715 F.3d 1336, 1347 (Fed. Cir. 2013) (affirming patents not invalid because the challenger failed to introduce expert testimony that was "required not only to explain what the prior-art references disclosed, but also to show that a person skilled in the art would have been motivated to combine them in order to achieve the claimed invention"); *Mytee Prods., Inc. v. Harris Rsch., Inc.*, 439 F. App'x 882, 886 (Fed. Cir. 2011). VinFast has not shown that Lachmann renders the Asserted Claims obvious.

(ii) Lachmann And Cornette

VinFast has not shown a motivation to combine Lachmann and Cornette. AMOpB at 95–

[redacted]

99. VinFast has not shown a motivation to combine Lachmann and Cornette to achieve the claimed interdiffusion layer. As ArcelorMittal explained, Dr. Brown only stated that a motivation to combine exists because of "different processing conditions," which is insufficient to show a POSITA would have been motivated to combine Lachmann and Cornette. *Id.* VinFast tries to identify a motivation by offering justifications for combining the references not offered by its expert or at the hearing. VFOpB at 97 (quoting RX-0019.0009–10). VinFast's attorney argument must again be disregarded. *Certain Comput. Network Sec. Equip. & Sys.,* 2023 WL 5744218, at *55 ("[The] attorney argument is not supported by [the] testimony. Persuasive expert testimony includes an articulated reason for modifying a teaching to arrive at a claimed invention.").

Even putting this aside, VinFast's selective quotation of Cornette provides no motivation to combine Cornette and Lachmann to achieve the claimed interdiffusion layer. VinFast mischaracterizes Cornette to suggest that Cornette ascribes benefits to all its process parameters. Specifically, VinFast states that "Cornette discloses that these ***process*** specifics provide the 'best compromise between corrosion protection and weldability.'" VFOpB at 97. Not so. Cornette says only that "[t]he average ***layer thickness*** showing the best compromise between corrosion protection and weldability is 25 um." RX-0019.0009. VinFast's attorney argument did not explain why a POSITA would have been motivated to look at all of Cornette's process parameters when Cornette describes a benefit only to the pre-coating thickness.

VinFast also suggests that Cornette says its process provides "excellent mechanical properties of the material after the press hardening process with good corrosion protection." VFOpB at 97 (quoting RX-0019.0009–10). But, as Dr. Raabe explained, Cornette says that "[m]echanical properties after hot forming process are not guaranteed by USINOR"; as such, and without guaranteed properties, a POSITA reviewing Cornette would not have considered

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Cornette's process reliable. AMOpB at 97 (quoting RX-0019.0009–10, and citing Tr. (Raabe) at 1063:13–1064:14). VinFast ignores Cornette's disavowal and Dr. Raabe's testimony.

As another attempt to show motivation to combine, VinFast states that Lachmann uses USIBOR 1500 steel and there are "other similarities, such as heating temperatures," which would have motivated a POSITA to apply Cornette's disclosures to Lachmann. VFOpB at 97–98 (citing Tr. (Brown) at 888:23–889:10, 814:1–14, 895:7–12). But VinFast's citations to Dr. Brown do not support its argument. Dr. Brown never stated that a POSITA would have been motivated to combine these two references merely because Lachmann uses USIBOR 1500 or they have similar heating temperatures. Thus, there is no motivation to combine Lachmann and Cornette.

VinFast also has not shown that there would have been a reasonable expectation of success in combining Lachmann and Cornette to achieve the claimed invention. While VinFast concedes (as it must) that experimentation would have been required, it characterizes this experimentation as "well within the bounds of what was routine and achievable for a metallurgist of ordinary skill." VFOpB at 98 (citing Tr. (Brown) at 888:23–889:10, 814:1–14). But Dr. Brown's testimony does not support VinFast's attorney argument. *See supra* § II.C.2.c.ii. At bottom, VinFast does not explain how a POSITA could combine Lachmann and Cornette, such that everything VinFast alleges about Lachmann stays the same despite the inclusion of Cornette's interdiffusion layer.

Finally, for claim 10, VinFast additionally argues that a POSITA would have been motivated to "experiment" to arrive at the claimed thickness of less than 10 micrometers, even though neither reference discloses an interdiffusion layer of less than 10 micrometers, as "a matter of routine optimization." VFOpB at 99. VinFast cites to Dr. Brown and Takagi as support, but Dr. Brown never says this would a matter of routine optimization and never explains why Takagi provides a motivation. *Id*. (citing Tr. (Brown) at 888:6–890:11). *Certain Outdoor & Semi-*

[redacted]

Outdoor Elec. Displays, Inv. No. 337-TA-1331, Final ID, 2023 WL 8520564, at *62 (Nov. 13, 2023) ("MRI provides only attorney argument in support . . . and th[at] showing is insufficient.").

(iii) Lachmann And Laurent

VinFast has not shown a motivation to combine Lachmann and Laurent. AMOpB at 99–100. Dr. Raabe explained how Dr. Brown did not show that Laurent had superior properties to Lachmann or that Lachmann had inferior properties to Laurent, such that a POSITA would have been motivated to combine the two. *Id.* Nor did VinFast address this deficiency in its brief. VFOpB at 100–01. Thus, VinFast has not shown a motivation to combine.

(iv) Secondary Considerations

ArcelorMittal showed that secondary considerations also support a finding of non-obviousness. AMOpB at 100–103. To avoid this strong evidence, VinFast resorts to mischaracterizing the evidence to argue that no nexus exists. VFOpB at 104–110.

VinFast first argues that sales of pre-coated USIBOR 1500 cannot be used as evidence of commercial success because USIBOR 1500 existed before the Asserted Patents, hot stamping existed before the Asserted Patents, and USIBOR 1500 is not claimed by the Asserted Patents. VFOpB at 104–05. But VinFast ignores that before the Asserted Patents, USIBOR 1500 was not commercially successful—yet after the patents, sales increased significantly. AMOpB at 101–02 (citing Drs. Drillet and Raabe).

VinFast then tries to undermine the overwhelming evidence of USIBOR 1500's commercial success after the Asserted Patents. VFOpB at 106–08. Dr. Raabe testified that he reviewed evidence showing increased sales of USIBOR 1500. Tr. (Raabe) at 1067:14–20 (CX-0565C.0013). VinFast argues that because Dr. Raabe relied on a graph that also contained forward-looking future projections of USIBOR sales into 2025, Dr. Raabe's testimony should be disregarded as purely speculative. VFOpB at 107. VinFast is incorrect. VinFast does not assert

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that the numbers before 2015 are speculative and, at a minimum, those numbers are relevant to the commercial success of USIBOR 1500 after the Asserted Patents. But even the forward-looking projection show ArcelorMittal had expectations USIBOR 1500 sales would continue to increase, and this has been borne out by the substantial economic domestic industry. AMOpB at 101–02 (citing evidence of significant sales). Indeed, VinFast ignores how the domestic industry part of this Investigation is significant evidence of commercial success and nexus. *Id.* at 100–04.

Next, VinFast states that Dr. Raabe should not have relied on Dr. Drillet's "unsupported testimony" that after the invention, sales of USIBOR increased. VFOpB at 107. However, Dr. Drillet's testimony is evidence from a ***percipient witness***. His testimony is supported by his personal observations and experience.

Finally, VinFast argues that Dr. Fekete opined that USIBOR 1500 was not successful. This statement was made in 2010 in the context of a different patent ('805 patent) that merely covered the base steel. AMOpB at 102–03. Dr. Fekete's 2010 testimony is consistent with Dr. Drillet's present testimony—USIBOR 1500, by itself, was not successful.

As to long-felt need, VinFast argues there is no nexus, VFOpB at 109, but Drs. Raabe and Drillet testified both that industry was searching for a high-strength, hot-stamped steel product that displayed better weldability, paintability, and corrosion resistance, and that the invention yielded unexpected results. AMOpB at 102–03 (citing Tr. (Raabe) at 1067:21–1068:8; (Drillet) 108:3–109:3.). VinFast's only response is that there were other steel products that claimed good weldability and corrosion resistance. VFOpB at 109. But just because other products alleged that they exhibited good weldability and corrosion resistance does not mean that whether their performance was satisfactory in the industry or that they had better weldability and corrosion resistance than the claimed invention. As a result, VinFast's arguments do not contradict or

[redacted]

undermine Dr. Raabe's opinions.

As to unexpected results, VinFast argues that Dr. Raabe's testimony was conclusory, and so should be disregarded. VFOpB at 109–110. VinFast is again wrong. Dr. Raabe expressly explained that he developed his testimony based on Dr. Drillet's testimony. *Id.* (quoting Tr. (Raabe) at 1068:9–16). Dr. Drillet explained how difficult it was to invent the claimed invention in painstaking detail and years of work. Tr. (Drillet) at 119:16–134:10. Thus, there is nothing unsupported about Dr. Raabe's testimony.

e) Alleged Prior Art Hot-Stamping Processes

(i) Alleged Invalidity Based on Two Parameters

VinFast's brief confirms that its anticipation theory based on prior art hot stamping fails for the reasons explained in ArcelorMittal's brief. AMOpB at 104–06. First, VinFast did not provide a limitation-by-limitation analysis of the claims, or even suggest how the alleged prior art disclosed each and every limitation of the Asserted Claims. *Id.* at 103–04. This is fatal to VinFast's anticipation argument. *Id*. (citing cases). Second, VinFast's entire invalidity theory is based on the erroneous premise that the claimed invention can be achieved by just knowing the heating temperature and heating time. This is factually wrong and not supported by the evidence. AMOpB at 103–05. Without establishing this factual predicate, VinFast's entire theory fails because the only two parameters it can show in the alleged prior art are heating temperature and heating time. VFOpB at 58–63.

(ii) Alleged Invalidity Based on [redacted]

VinFast's [redacted] anticipation theory is based on a control plan that was ***revised*** in August 2006 (***after*** conception). RX-0056C.0001; AMOpB at 106–08. [redacted] representative, [redacted], testified that means there were changes to the process. AMOpB at 107 (citing RX-1277C (Webb) at 143:3–16). There is not a single witness that can identify what those changes

[redacted]

are. *Id*. (citing Tr. (Raabe) at 1072:23–1073:2; RX-1277C (Webb) at 178:4–19; Tr. (Raabe) at 1073:3–22). This is fatal to VinFast's anticipation theory because VinFast cannot show that this process was used before the critical date.

Rather than confront these facts, VinFast ignores them and resorts to mischaracterizing the testimony of [redacted]. VFOpB at 64–68. [redacted], who did not start working at [redacted], never testified that [redacted]. AMOpB at 107; RX-1277C (Webb) at 179:10–12. [redacted]. AMOpB at 107 (citing RX-1277C (Webb) at 171:22–172:2, 185:5–15). [redacted] RX-1277C (Webb) at 185:5–14. He did not say what that result was, and that testimony does not mean that [redacted]. Nor could it, because (again) the [redacted]. VinFast's interpretation of [redacted] testimony not only contradicts what [redacted] actually said, but it also contradicts the [redacted]. VinFast's mischaracterization of [redacted] testimony is not clear and convincing evidence—rather, there is no evidence that [redacted] anticipates the Asserted Claims.

3. The Term "Layer" Is Definite under § 112

VinFast's argument that "layer" is indefinite is built on a flawed claim construction analysis, a blind eye to claim construction law, and misinterpretations of the Asserted Patents and evidentiary record. The Federal Circuit has long held that "[i]n construing claims, the analytical focus must begin and remain centered on the language of the claims themselves." *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005) (en banc) ("[T]he claims themselves provide substantial guidance as to the meaning of particular claim terms.").

[redacted]

Rather than start with the claim language, VinFast does all it can to avoid addressing the claim language. Indeed, taking '602 Patent (JX-0002), claim 1 as an example, the claim recites:

> "proceeding from the base steel outwards:
>
> (a) an interdiffusion layer having a first mean iron composition,
>
> (b) an intermediate layer having a second mean iron composition different from the first mean iron composition,
>
> (c) an intermetallic layer having a third mean iron composition different from the first and second mean iron compositions, the third mean iron composition being higher than the second mean iron composition; and
>
> (d) a superficial layer having a fourth mean iron composition different from the third mean iron composition …"

The claim language thus defines the orientation of each layer with respect to the other layers, including the progression of layers from the base steel outwards. The claim language also provides objective notice of how to discern one layer from the next based on changes in "mean iron composition." Because the claims define the layers in this way, the ArcelorMittal witnesses that VinFast quotes (*i.e.*, Drs. Drillet and Fekete and Mr. Krishnan) referred the "chemical composition" as a defining feature of a layer. VFOpB at 113–14. Dr. Fekete showed how, for example, "line scan" tests identify the different layers based on mean elemental composition.

[redacted]

Tr. (Fekete) 480:14–482:1 (referring to CDX-0003C.52). The specification also provides support

[redacted]

for what is claimed.[16] *See, e.g.*, '602 Patent at 6:25–45 (describing the layers by their different elemental compositions).

Rather than acknowledge the consistent testimony of the multiple ArcelorMittal witnesses on this point, VinFast erroneously asserts (again without explanation) that "if different elemental compositions were the distinguishing characteristic of a 'layer,' much of the claim language would be superfluous." VFOpB at 114. VinFast quotes how claim 1 of the '602 Patent describes "an interdiffusion layer having a first mean iron composition," but does not state which of those terms would be superfluous or why. *Id.* Regardless, there is no superfluous language. Identifying the mean iron composition of the interdiffusion layer is necessary at least to allow subsequent elements to provide further detail about that mean iron composition—*e.g.*, claim 1's requirement that the "second mean iron composition [be] different from the first mean iron composition" or claim 19's requirement that "the first mean iron composition is 90 percent." *Id.* at cls. 1, 19.

Ignoring the claim language, and emblematic of its flawed approach, VinFast jumps right to the specification to sow confusion by purportedly discussing Figure 2, while citing portions of the specification that ***do not*** reference Figure 2. *See* VFOpB at 112 (citing JX-0002 at 13:1–6). Instead, VinFast plucks a few lines out of a longer discussion of ***Example 2***, which describes two sets of processing conditions and the different results obtained between those conditions. *See* JX-0002 at 12:30–13:6. Nowhere does the cited specification passage reference Figure 2 or otherwise

[16] Similarly unavailing is VinFast's single-sentence, conclusory assertion that the specification's reference to how "layers may be comprised of sublayers" renders the term "layer" indefinite. VFOpB at 113. The specification does describe an embodiment in which the ***interdiffusion layer*** is comprised of two sub-layers, which provides clear guidance as to how a "sub-layer" relates to a "layer." JX-0002 at 12:45–48. The interdiffusion layer in that embodiment is defined as having a distinct "mean composition" of elements ("90% Fe, 7% Al, 3% Si"), consistent with all other references to a "layer" in the patents. JX-0002 at 12:45–48; *see id.* at 12:49–56 (stating mean composition for remaining three layers).

[redacted]

suggest it is describing Figure 2. *See id.* VinFast's indefiniteness argument is thus premised on drawing connections between unrelated portions of the specification—a misreading of the patents.

Nevertheless, column 13's discussion of Example 2 does not inject ambiguity into the meaning of the term "layer." The specification's description of an intermetallic layer that is "not continuous" and "scattered within the coating" is consistent with both (1) Figure 2's depiction of a non-continuous layer, and (2) '602 Patent, claim 2's description of layers that are only "quasi continuous." *See id.* at Fig. 2, 13:1–4, cl. 2; *see also id.* at 6:52–56. As ArcelorMittal explained, a layer need not be continuous. AMOpB at 43–45. *Arguendo*, even if column 13 did reference and describe Figure 2 (it does not), VinFast provides no reason for why a POSITA would expect Figure 2 to depict the claimed thickness limitations. The specification says that Figure 2 "does ***not*** correspond to the invention." JX-0002 at 3:57–59. It is unremarkable that the specification does not provide a thickness of Figure 2's intermetallic layer, or its interdiffusion layer for that matter; the Asserted Patents simply do not attempt to apply the claimed thickness limitations to a figure that does not embody the invention.

VinFast next engages in a flawed claim construction analysis to assert that the claims require a "layer" to "have a thickness," "some degree of continuity and a 'level'" even though such requirements cannot be "reconciled" with the intermetallic layer of Figure 2. *See* VFOpB at 114. It is well established that the "varied use of a disputed term in the written description attests to the breadth of a term rather than providing a limiting definition." *Anchor Wall Sys., Inc. v. Rockwood Retaining Walls, Inc.*, 340 F.3d 1298, 1308 (Fed. Cir. 2003); *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 991 (Fed. Cir. 1999). To the extent Figure 2 does not show an intermetallic layer with a thickness, degree of continuity, or level, then Figure 2's varied use of the term "layer" demonstrates that the term "layer" does not have these limitations, much less that

[redacted]

it is indefinite. Rather, as ArcelorMittal described, the intrinsic evidence is all consistent with a "layer" being defined by its distinct mean elemental composition. AMOpB at 108–10.

Because the intrinsic evidence demonstrates that the meaning of the term "layer" "is unambiguously set forth in the specification, the expert testimony on this issue"—consisting of a single conclusory sentence (Tr. (Brown) at 993:7–13)—"is irrelevant to the issue of indefiniteness and cannot serve to inject ambiguity where none exists." *Personalized Media Commc'ns, LLC v. Int'l Trade Comm'n*, 161 F.3d 696, 706 (Fed. Cir. 1998); *see also Niazi Licensing Corp. v. St. Jude Med. S.C., Inc.*, 30 F.4th 1339, 1349 (Fed. Cir. 2022) ("Taken as a whole, . . . the intrinsic record is sufficient to dispose of the indefiniteness issue[].") (internal quotations omitted). Regardless, Dr. Brown's opinion that he could identify layers in the prior art demonstrates the definiteness of "layer." *See* AMOpB at 110–11 (citing *Sonix Tech. Co. v. Publ'ns Int'l, Ltd.*, 844 F.3d 1370, 1380 (Fed. Cir. 2017); *ClearOne, Inc. v. Shure Acquisition Holdings, Inc.*, 35 F.4th 1345, 1350–51 (Fed. Cir. 2022)). VinFast's citations to two non-precedential opinions are inapposite. *See* VFOpB at 115. *Mantissa Corp. v. First Financial Corp.* does not address the application of a disputed claim term in an invalidity analysis, or even extrinsic evidence more generally. No. 2022-1963, 2024 WL 607717, at *2 (Fed. Cir. Feb. 14, 2024) ("[T]he issue of indefiniteness can be resolved based on the intrinsic evidence alone."). And *Vstream Technologies, LLC v. PLR Holdings, LLC* actually undercuts VinFast's position, as it recognizes that application of a term for invalidity "may be extrinsic evidence ***supporting*** definiteness." No. 6:15-cv-974-JRG-JDL, 2016 WL 6211550, at *8 (E.D. Tex. Sept. 27, 2016).

Finally, VinFast misrepresents the record when it relies on testimony about unlabeled, modified SEMs to assert that Dr. Fekete has an "inconsistent application of his own understanding of the term layer." *Cf.* VFOpB at 115–19. Tellingly, despite filling almost four pages of its brief

[redacted]

with block quotes of the trial transcript, VinFast fails to point to a ***single*** instance where Dr. Fekete applied conflicting meanings to the term "layer" with respect to VinFast's unlabeled SEMs. *See id.* Each time Dr. Fekete said there were "layers," including in the text bolded by VinFast, he was referring to the images in his report that he considered as part of the holistic testing analysis. *See id.* By contrast, as ArcelorMittal explained, Dr. Fekete carefully and consistently explained that his testimony about VinFast's unlabeled SEMs was "not an analysis of a micrograph as to whether or not you have the four-layer structure." *See* AMOpB at 111 (quoting Tr. (Fekete) at 661:13–21, 662:19–663:6, 659:10–22). VinFast's attempt to reduce Dr. Fekete's analysis of the term "layer" to simply whether a single SEM looks more like Figure 1 or Figure 2 of the Asserted Patents is not only wrong but also would not be "a reliable way of doing an analysis of this type of a situation," as Dr. Fekete explained. *Id.* at 33–34; Tr. (Fekete) at 657:11–658:2. Instead, Dr. Fekete's analysis as to whether the claimed four-layer structure was present in tested parts was significantly more informed, involving the use of line scans, spot EDS data, and SEM images of known parts collected by labs that he knew to be accredited and applying a protocol that he had previously approved of. Tr. (Fekete) at 660:8–19; *see* AMOpB §§ I.F, III.B, and III.C.

As such, VinFast's assertion that Dr. Fekete's testimony was in response to being "asked to perform the *same* methodology" as he did for infringement and technical domestic industry is patently false. *Cf.* VFOpB at 115 (emphasis in original). At Dr. Fekete's deposition, VinFast's counsel did not connect the unlabeled SEM images to the images in Dr. Fekete's report or otherwise provide any context for the unlabeled SEM images, meaning that "the only thing [Dr. Fekete] knew in that moment [was] that [he] was looking at a picture that had somehow been altered, and [he] didn't know how that picture had been altered." Tr. (Fekete) at 658:3–9. Those unlabeled images presented without context did "not giv[e] you the information you needed [to

[redacted]

determine] whether that was a four-layer structure." *Id.* at 659:10–22. Because of the limited information VinFast presented, Dr. Fekete made sure—both at the hearing and in his deposition—that "there was never a question about whether we were practicing the claims" when addressing the unlabeled SEMs. *Id.* at 662:19–663:6. Instead, he answered simply about whether "this photograph look[s] more like Figure 1 or Figure 2." *Id.* Dr. Fekete's testimony as to these images is unrelated to how he applied the term "layer," much less the supposed indefiniteness of that term.

III. THE '227 PATENT

A. Infringement

See supra § II.A.

B. Technical Domestic Industry

See supra § II.B.

C. Validity

1. Priority Date of The Asserted Patents

See supra § II.C.1.

2. The Asserted Patents Are Not Invalid

See supra § II.C.2.

3. The Term "Layer" Is Definite under § 112

See supra § II.C.3.

IV. ECONOMIC DOMESTIC INDUSTRY

The domestic industry in this Investigation is expansive; it includes extensive investment by numerous parties in a complex supply chain that facilitates lighter, stronger, safer vehicles. Tr. (Malackowski) at 365:11–383:3. Specifically, certain licensed precursor steel manufacturers supply dozens of Tier 1 manufacturers with Al-coated steel (DI Precursor Products), and these Tier 1s process the Al-coated steel into licensed, hot-stamped automobile parts (DI Direct

[redacted]

Products). *Id.* Automotive manufacturers incorporate these hot-stamped parts into a multitude of different vehicles. *Id.* This entire, multibillion-dollar ecosystem was created by, and continues to be supported by, ArcelorMittal's engineering, research, and development (ER&D) work. *Id.*

Given the extensive domestic investment in these patented articles, there can be no serious challenge to the significance or substantiality of the investments in the domestic industry. Indeed, VinFast does not challenge the qualitative significance of ArcelorMittal's domestic industry, and its main attack on the quantitative significance analysis focuses on just one of ArcelorMittal's four significance analyses. Instead, VinFast principally attacks the robust evidence of economic domestic industry by (1) challenging the extent to which the many parts in this complex ecosystem practice the patents and (2) arguing ArcelorMittal's allocations of investments are thus unsupported. As discussed below, VinFast's arguments are wrong as to each of 19 U.S.C. § 1337(a)(3)(A)–(C), as is VinFast's claim that "ArcelorMittal cannot show that its DI Precursor Products relate to patented articles that exploit the asserted patent [sic]." VFOpB at 152. The evidence shows which precursor products were used in which of the Tested DI Direct Products, and that the DI Precursor Products become DI Direct Products through hot stamping. *Infra* § IV.B.1.b; *supra* § II.B.

Investments in ER&D. Devoting less than a page to investments in ER&D under § 1337(a)(3)(C), VinFast's brief glaringly misses the mark. Without any case citation, VinFast incorrectly argues these investments must be apportioned to those hot stamped parts ArcelorMittal was able to test during discovery. VFOpB at 169–70. They do not. *See infra* § IV.A. The ER&D investments under 19 U.S.C. § 1337(a)(3)(C) are quantitatively and qualitatively substantial, and VinFast's only rebuttal relies on misapplying the law.

Investments in Plant & Equipment and Labor & Capital. The investments in labor and

[redacted]

capital and plant and equipment under 19 U.S.C. § 1337(a)(3)(A)–(B) are even greater than ER&D investments. In attacking these investments, VinFast again fundamentally misapplies the law. VinFast primarily focuses on challenging ArcelorMittal's summation—*i.e.*, totaling—of the investments in labor and capital and plant and equipment. Given the vast, multiparty nature of the domestic industry in the Asserted Patents involving multiple steel manufacturers, dozens of Tier 1 manufacturers and automotive manufacturers, identifying a single number for the relevant investments is neither necessary nor practical; any feasible method of totaling up investments will be drastically underinclusive. Even so, no matter what approach is used to quantify investments, the evidence shows that the investments are quantitatively and qualitatively significant.

As to qualitative significance, ArcelorMittal demonstrated these investments are important for consumer safety, lighter vehicles and increased fuel efficiency, and to the local economies where the DI Precursor Products and DI Direct Products are manufactured. AMOpB at 170–71. As to quantitative significance, Mr. Malackowski offered four alternative, but complementary, analyses under § 1337(a)(3)(A) & (B), only one of which depends on the total sum of investments:

1. The investments add significant value to the DI Products, as evidenced by their high profitability relative to other steel products. *Infra* § IV.C; *see also* AMOpB at 171–73. This analysis does *not* depend on the method of totaling investments.

2. The investments add significant value to the DI products, as evidenced by the costs incurred in the U.S. to manufacture the patented articles, as compared to the costs unrelated to investment in the U.S. *Infra* § IV.C; *see also* AMOpB at 171–74. This analysis does *not* depend on the method of totaling investments.

3. The investments are quantitatively significant considering the production of press hardened steel ("PHS") in the U.S. versus the rest of the world, which shows that the relative share of PHS manufactured in the U.S. is much greater than the U.S.'s share of steel production. *Infra* § IV.C; *see also* AMOpB at 174–75. This analysis does *not* depend on the method of totaling investments.

4. The investments are quantitatively significant standing alone. *Infra* § IV.C; *see also* AMOpB at 166–70. This is the only quantitative significance analysis that depends on the method of totaling (*i.e.*, summing) investments.

[redacted]

As detailed below, VinFast has no answer to ArcelorMittal's showing of quantitatively and qualitatively substantial investments in ER&D, nor to ArcelorMittal's quantitatively and qualitatively significant investments in plant and equipment and labor and capital under methodologies 1 through 3. *Infra* §§ IV.A and IV.C. VinFast focuses most of its economic domestic industry argument on nitpicking the particular methodology used for summing up investments (*i.e.*, the fourth methodology identified above). But VinFast's arguments regarding how the investments should be summed are unrelated to the quantitatively significant domestic industry under § 1337(a)(3)(A) & (B) based on any one or more of items 1–3 above, and they are thereby rendered moot. Nonetheless, to fully address VinFast's arguments, ArcelorMittal details the appropriate methods of summing up the investments in Section IV.B below. These investments are quantitatively significant under any measure.

A. ArcelorMittal Has Proven The Existence of A Domestic Industry under 19 U.S.C. § 1337(a)(3)(C), and VinFast Has No Legally Coherent Argument to The Contrary (Response to VFOpB § IV.B.5)

ArcelorMittal detailed in its opening post-hearing brief how it invested substantially in ER&D to exploit products that practice the Asserted Patents, and how these investments are closely connected to the patented articles. AMOpB at 162–65 (citing exhibits, the testimony of Mr. Krishnan and Dr. Atkinson and the expert testimony of Mr. Malackowski). Mr. Malackowski testified that from [redacted], ArcelorMittal invested [redacted] in equipment and [redacted] in labor) in ER&D investment related to the DI Products. Tr. (Malackowski) at 385:14–17 (referring to CDX-0002C.28C); CX-0006C; CX-0271C; CX-0273C; CX-0274C; CX-0466C; CX-0481C; CX-0668C; Tr. (Krishnan) at 197:23–201:18 (explaining equipment needed for ER&D related to DI Products). From an economic perspective, this "was critical, because it's enabling the success of these [DI] products." Tr. (Malackowski) at 381:24–25.

VinFast's primary rebuttals are that Mr. Malackowski allegedly "does not allocate the

[redacted]

alleged investments to articles that practice the Asserted Patents," and that "ArcelorMittal fails to show that hot stamping of the alleged DI Precursor Products converts those products into practicing products." VFOpB at 170. Both arguments are factually wrong. As to the first argument, Mr. Malackowski excluded engineering projects that were not related to USIBOR or DUCTIBOR with a coating weight of AS 150 and equipment that was not critical to ArcelorMittal's ER&D work on such products. *See, e.g.*, Tr. (Malackowski) 384:12–385:13. Mr. Malackowski explained that, for ER&D equipment, he "identified with Mr. Bala Krishnan the ten items that were most strongly linked" to the DI Products, and for engineering projects, removed "[redacted] work projects, which were unrelated, and . . . some miscellaneous expenses of about [redacted]." *Id.* As to the second argument, ArcelorMittal has provided extensive evidence, including testing evidence, that hot stamping the DI Precursor Products creates the DI Direct Products that practice the patents. *Supra* § II.B; *infra* § IV.B.1.b.[17]

VinFast's arguments are also legally misplaced. VinFast fails to cite a single case requiring further apportionment than Mr. Malackowski performed (*see* VFOpB at § IV.B.5) and the actual law is far less rigid than VinFast presumes. *Certain Disposable Vaporizer Devices*, Inv. No. 337-TA-1410, Ord. No. 28, 2024 WL 5378663, at *19 (Mar. 21, 2025) ("Whether a complainant satisfies the economic prong is not analyzed according to a rigid mathematical formula.") (citing

[17] VinFast also suggests (without analysis or legal citation) Mr. Malackowski's calculation is "overstated" because of the time of the investments. VFOpB at 169–70. But "[p]ast expenditures may be considered to support a domestic industry" if they "pertain to" "articles protected by the" the patents and "the complainant is continuing to make qualifying investments at the time the complaint is filed." *Hyosung TNS Inc. v. ITC*, 926 F.3d 1353, 1361–62 (Fed. Cir. 2019) (there is no "bright line rule for rejecting research expenditures that are made more than five years earlier") (quoting *Certain Television Sets, Television Receivers, Television Tuners & Components Thereof*, Inv. No. 337-TA-910, Comm'n Op., 2015 WL 6755093, at *36 (Oct. 30, 2015)). As discussed, ArcelorMittal showed its ER&D "pertain[s] to" the Asserted Patents and it continues to "continuing to make qualifying investments."

[redacted]

Wuhan Healthgen Biotechnology Corp. v. Int'l Trade Comm'n, 127 F.4th 1334, 1339 (Fed. Cir. 2025)). Given the nature of ER&D investments, the Commission has long recognized "it is not necessary that a particular research and development project result in a completed product to be considered part of the relevant domestic industry," provided it is otherwise "clear that the project is devoted to the exploitation of the patent." *Certain Dynamic Sequential Gradient Compression Devices*, Inv. No. 337-TA-335, Comm'n Decision, 1992 WL 12668881, at *45 (Nov. 1, 1992); *Certain Microlithographic Machs.*, Inv. No. 337-TA-468, ID, 2003 WL 1831891, at *213 (Jan. 29, 2003); *Certain Magnetic Tape Cartridges*, Inv. No. 337-TA-1036, ID, 2018 WL 4634919, at *125–26 (Jan. 25, 2018); *see also* AMOpB at 125–26. This is particularly applicable to ER&D because "[i]nvestments in research are not always easily traceable to specific engineering feats or particular products." *Certain Filament Light-Emitting Diodes (II)*, Inv. No. 337-TA-1220, ID, 2021 WL 6102808, at *112 (Nov. 19, 2021). The Federal Circuit has made clear "[i]t is not necessary that the party manufacture the product that is protected by the patent, and it is not necessary that any other domestic party manufacture the protected article," if there is "a sufficiently substantial investment in the exploitation of the intellectual property." *InterDigital Commc'ns, LLC v. Int'l Trade Comm'n*, 707 F.3d 1295, 1303–04 (Fed. Cir. 2013).

ArcelorMittal made such a showing. The relevant ER&D projects supported Calvert in manufacturing DI Precursor Products and Tier 1s and automotive manufacturers in adopting and incorporating DI Direct Products into vehicles. *See* above and AMOpB at 162–65.

B. ArcelorMittal Has Proven The Existence of A Domestic Industry in Articles Protected by The Asserted Patents under Each of 19 U.S.C. § 1337(a)(3)(A) and 19 U.S.C. § 1337(a)(3)(B) (Response to VFOpB § IV.B)

For investments in plant and equipment and labor and capital, ArcelorMittal demonstrated both quantitative and qualitative significance. VinFast does not challenge ArcelorMittal's showing of qualitative significance. As to quantitative significance, ArcelorMittal has shown

[redacted]

significance through four independent, complementary analyses—two related to the value added to the DI Products; one comparing the production of the DI Products in the U.S. to worldwide production, measured against production of steel generally; and one based on the absolute value of the identified investments. VinFast's sole attack is as to the summing of investments. VFOpB at 148–169, 170–73. Yet only the last of these four depends on summing investments. As documented in ArcelorMittal's opening brief, the other three analyses each independently supports a finding of significant investment. *See* AMOpB § V.D.

As to the fourth analysis (in which investments are summed), ArcelorMittal identified three economic methods for summing the investments based on the evidence adduced at the hearing:

1. **The DI Precursor Product Method**. ArcelorMittal's expert's analysis focused primarily on this method, which apportions investments related specifically to processing of DI Precursor Products—aluminized steel coils with a coating weight of AS 150 (or similar coating weights, *e.g.* 60/60). Considering Calvert and five of the seven subpoenaed Tier 1s,[18] the investments total [redacted] in investment in plant and equipment as well as labor and capital. AMOpB at 167–69.

2. **The *Magnetic Data Storage Tapes* Method**. Commission precedent allows including the *entirety* of fixed costs required to produce domestic industry articles. These costs are in evidence—*e.g.*, the [redacted] in investment required *just at Calvert* to convert a raw steel slab into a DI Precursor Product. This method provides an alternative summation of investments that moots VinFast's primary argument regarding the DI Precursor Product Method.[19] AMOpB at 166–67.

3. **The Tested DI Direct Product Method**. As a conservative alternative to the methods above, the evidence supports apportioning investments to a subset of the Tested DI Direct Products—specifically those from [redacted]

[18] ArcelorMittal took discovery from seven subpoenaed Tier 1 manufacturers: [redacted]. Certain testing results related to [redacted] were stricken (Ord. No. 19) and ArcelorMittal submitted offers of proof for those results. AMOpB § VI. For simplicity, however, ArcelorMittal focuses its discussion on the investments by [redacted]

[19] ArcelorMittal addressed the *Magnetic Data Storage Tapes* Method before addressing the DI Precursor Apportionment Method in its opening pre-hearing brief because it preempts VinFast's attacks as to whether the Tested DI Direct Products are representative of other products. This method thus provides a simplified path to resolving the domestic industry question under § 1337(a)(3)(A) in ArcelorMittal's favor.

[redacted]

> While this overly conservative method is not required under the relevant precedent or evidence, it demonstrates that, even accepting VinFast's non-representativeness argument, DI investments still exceed [redacted]. AMOpB at 169–70.

Thus, as discussed below, the sum of investments is quantitatively significant standing alone under any reasonable method of summation.

1. The Record Shows Significant Investments for The DI Precursor Products (Response to VFOpB § IV.B.1)

VinFast's attack on ArcelorMittal's summation of investments for the DI Precursor Products is fundamentally flawed. First, VinFast is mistaken as to the evidentiary apportionments required under Commission precedent, since ArcelorMittal has shown that aluminized steel with a coating weight of AS 150 made at the Calvert facility is specifically tailored for use in an article protected by the patent. Second, VinFast is mistaken that the evidence does not link the Tested DI Direct Products to the DI Precursor Products. As shown below, each Tested DI Direct Product is made from a known DI Precursor Product or otherwise licensed steel. Finally, VinFast's arguments that the record does not demonstrate quantitatively significant investments in the DI Precursor Products flatly are wrong under any method of summation

a) VinFast Misapprehends The Law Regarding Economic Domestic Industry under § 1337(a)(1)(A) & (B) (Response to VFOpB § IV.B.1.i)

VinFast argues that ArcelorMittal may not rely on its investments in the DI Precursor Products for economic domestic industry because ArcelorMittal did not further apportion (*i.e.*, "disaggregate") the investment with respect to the patented articles. VFOpB at 150–52. By making this argument VinFast ignores that the vast majority of the DI Precursor Products are "specifically tailored for use" in the DI Direct Products in compliance with 19 U.S.C. § 1337(a)(3). *Motorola Mobility, LLC v. Int'l Trade Comm'n*, 737 F.3d 1345, 1351 (Fed. Cir. 2013); *infra* § IV.B.1.b. Putting that aside, VinFast's disaggregation argument fundamentally misunderstands the law; its cited cases *support* ArcelorMittal's domestic industry. Indeed, VinFast relies on cases

[redacted]

holding that investments in an upstream product, where the downstream product directly practices the patent claims, *do* count toward domestic industry. VinFast's cases do not, however, speak to the *quantity* of such investments that count, or the degree of disaggregation required.

As to the question of ***whether to count investments*** in DI Precursor Products, ArcelorMittal has shown that aluminized steel with a coating weight of AS 150 is "specifically tailored for use in an article protected by the patent" in compliance with 19 U.S.C. § 1337(a)(3). *Motorola Mobility*, 737 F.3d at 1351. Of the 15 parts made from such steel that were produced and tested in this in this litigation, 12 practiced one or more of the DI Asserted Claims. *Supra* §§ II.B, III.B; *see also* Tr. (Drillet) at 102:6–13 (inventor testifying the Asserted Patents were for USIBOR); Tr. (LeBlanc) at 339:8–340:22 (Calvert makes USIBOR and DUCTIBOR pursuant to a license to use the Asserted Patents), 342:20–23 (Tier 1s are authorized to practice the Asserted Patents using licensed precursor steel). This evidence conclusively establishes that the precursor products are specifically tailored to practice the Asserted Patents. VinFast's effort to ignore the law that requires consideration of this evidence must be rejected.

VinFast's argument also mistakenly presumes that, to credit investment in upstream products (the DI Precursor Products), ArcelorMittal was required to obtain samples of each of the multitude of downstream products, test each such product, and isolate and remove any investment that could be attributable to such products that did not ultimately practice the Asserted Patents. VinFast cites only one case allegedly in support of this purported requirement, but nothing in that case supports this argument. *Certain UMTS & LTE Cellular Commc'n Modules & Prods.*, Inv. No. 337-TA-1240, Final ID, 2022 WL 1315591 (Apr. 1, 2022). In *UMTS*, the Commission observed that the complainant's expert conducted some allocation of the "operating expenses" to account for the DI products that "contained cellular communication modules practicing the

[redacted]

asserted patents," but the Commission *did not* state that this allocation was necessary for determining whether the DI investment is directed to component products "specifically tailored for use in an article protected by the patent." *Id.* at *188, 184.

None of VinFast's cited cases in Section IV.B.1.i of its Opening Brief requires a complainant to prove that every downstream product practices the claims to establish that the upstream product is specifically tailored to an article protected by the patent. Tellingly, each of VinFast's cases concluded that the upstream investments *did count*. For example, in *Motorola Mobility*, the Federal Circuit affirmed the finding that complainant could rely on different parts of the DI products for the technical (mobile device) and economic (mobile device operating system) prongs, as "the operating systems were significant parts of the mobile devices running those operating systems." 737 F.3d at 1351. In doing so, the Court held that "[a]n investment directed to a specifically tailored, significant aspect of the article is still directed to the article," and "nothing in § 337 precludes a complainant from relying on investments or employment directed to significant components, specifically tailored for use in an article protected by the patent." *Id.* The same is true here: the claims in fact require a "precoated steel product," *i.e.*, the precursor product. *E.g.*, JX-0002, cl. 1; *see Certain Lithium Metal Oxide Cathode Materials*, Inv. No. 337-TA-951, Comm'n Determination, 2019 WL 4010940, at *55–56 (June 1, 2019) (upstream material recited in DI claim is the "most important component of the claimed [patented article]").

Similarly, in *Certain Lithium-Ion Battery Cells*, *Certain Lithium Metal Oxide Cathode Materials*, and *Certain Computer Network Security Equipment and Systems*, the complainants' reliance on investment in an essential and/or significant "component" of the articles practicing the patents satisfied 19 U.S.C. § 1337(a)(3). Inv. No. 337-TA-1181, Ord. No. 28, 2020 WL 7640098, at *7–9 (Nov. 23, 2020); 2019 WL 4010940, at *55–56; 2023 WL 5744218, at *46–47. Likewise,

[redacted]

the issue in *Certain Beverage Brewing Capsules* was whether investments in complainant's coffee pods were specifically tailored to the technical DI products ("beverage capsules in combination with the Keurig brewing machines"). Inv. No. 337-TA-929, Comm'n Determination, 2019 WL 10630509, at *115 (Feb. 1, 2019). The ALJ found that the "brewing capsules are significant components and are specifically tailored for use with a brewing machine." *Id.* at *116. The complainant was not required to show that every use of the capsules was in an infringing brewing machine/pod combination "on a model-by-model basis," but instead approximation based on a percentage of sales—similar to the approximation to AS 150 coating weight products here—was sufficient. *See id.* at *117 ("A precise accounting is not necessary, as most people do not document their daily affairs in contemplation of possible litigation.") (citing *Certain Stringed Musical Instruments*, Inv. No. 337-TA-586, Comm'n Op., 2009 WL 5134139, at *16 (Dec. 1, 2009)).

None of these cases required the complainant to demonstrate to a near certainty, as VinFast demands, that every downstream product in which an upstream component may be used practices the patent. In other words, nothing requires ArcelorMittal to prove that every DI Precursor Product is hot stamped into a DI Direct Product to credit the investments at Calvert. The rationale of these cases crediting upstream investments applies in even greater force here, where the precursor products are not merely a component, they are a necessary starting material (included in the claims) that is converted into products that practice the Asserted Patents. The extensive record evidence showing that USIBOR and DUCTIBOR with a coating weight of AS 150 are specifically tailored for—and intended to—practice the Asserted Patents, including that 12 of the 15 tested parts do in fact practice the DI claims, makes this clear. *See* AMOpB §§ II.C, III.C.

As to the ***quantity of investments*** that count, the law and the facts are firmly against VinFast. By limiting the analysis to USIBOR and DUCTIBOR products with a coating weight of

[redacted]

AS 150, ArcelorMittal has focused on the products specifically tailored for use in an article protected by the Asserted Patents. For example, in apportioning plant and equipment costs to the DI Precursor Products in the DI Precursor Product Apportionment Method, Mr. Malackowski conservatively excluded massive investments needed to manufacture those products. As explained, the Commission has held that it is appropriate to "consider[] the entirety" of investments related to the "equipment in question" used to manufacture domestic industry products, even if that equipment is also used for non-domestic industry products. *Certain Magnetic Data Storage Tapes & Cartridges*, Inv. No. 337-TA-1012, Comm'n Op., 2018 WL 8648372, at *73–74 (Apr. 2, 2018) (hereinafter *Magnetic Data Storage Tapes*) (considering the entirety of party's fixed costs even though equipment in question was used to assemble non-DI products); *Certain Biometric Scanning Devices*, Inv. No. 337-TA-720, Ord. No. 24, 2011 WL 1686363, at *4 (Feb. 16, 2011) ("Cross Match was required to invest in the space for each product regardless of whether the space is used to manufacture the other product."). Thus, Mr. Malackowski's DI Precursor Product Apportionment Method significantly understates the investment in the DI Precursor Products, even though ArcelorMittal's joint venture could not have made a single coil of DI Precursor Product without incurring the entirety of the investments for the three necessary manufacturing lines: the

[redacted] Tr. (Richards) at 314:15–17, 315:23–25, 317:4–6.

VinFast's only case that actually relates to disaggregation, *Zircon Corp. v. Int'l Trade Comm'n*, 101 F.4th 817, 824 (Fed. Cir. 2024), is inapposite. *Cf.* VFOpB at 145–46, 153. The rule of *Zircon* is that "in cases in which the complainant's products or groups of products each practice *different patents*, the complainant would need to establish separate domestic industries for *each of those different groups* of products." *Id.* at 824. That is not the case here; ArcelorMittal alleges

[redacted]

that the DI Direct Products all practice the same two Asserted Patents. Beyond its holding regarding *different* patents, the Federal Circuit also held that it is an "undisputed principle that, when assessing a complainant's expenditures for purposes of the economic prong, it is permissible to group [] different products together if they are all protected by the *same* patent." *Id.*

Accordingly, VinFast's legal arguments regarding disaggregation for the DI Precursor Product investments should be rejected.

b) ArcelorMittal Has Linked The DI Precursor Products to The Tested DI Direct Products (Response to VFOpB § IV.B.1.ii)

Contrary to VinFast's arguments (VFOpB at 153–56), ArcelorMittal presented substantial evidence linking the DI Precursor Products to the Tested DI Direct Products.[20] *See* AMOpB § I.G.

(i) [redacted]

VinFast claims the precursor steel for the [redacted] comes from an "unknown entity" and therefore investments in this DI Direct Product are not cognizable. VFOpB at 153. As explained in ArcelorMittal's opening brief, however, the precursor steel is supplied by "TK," which stands for "thyssenkrupp," a licensed steel manufacturer. AMOpB at 21–23. [redacted] documents confirm that [redacted] is made according to the USIBOR 1500 AS 150 specification, as the excerpt from CX-0354C below shows:

[redacted]

See also AMOpB at 21 n.3 (describing how [redacted]

[20] VinFast also argues that "[e]ven if ArcelorMittal could show hot stamping transformed *some* Usibor 1500 AS150 into an article protected by the patent, ArcelorMittal did not disaggregate its investment to isolate only that portion of investments." VFOpB at 152–53. Although such disaggregation is not required, evidence in the record shows the breakdown of Calvert USIBOR 1500, which was [redacted] of all aluminized steel production. CX-0156C.

[redacted] CX-0349C (row 41). Accordingly, the [redacted] is a DI Direct Product as it is hot stamped in the U.S. using licensed steel. AMOpB at 21–23; Tr. (Malackowski) at 369:13–19 (discussing CDX.0002C.08, defining DI Direct Products as products "converted from *licensed aluminized PHS with a specific coating weight* through hot stamping" by Tier 1 manufacturers in the United States).

(ii) [redacted]

VinFast claims ArcelorMittal "provided no evidence" the [redacted] is made of "Usibor, Ductibor, or Ultralume," because the material specification [redacted] lists for this part is [redacted] VFOpB at 153–54. VinFast is wrong. *See* AMOpB at 23–24. [redacted] data confirms the [redacted] is "AlSi" steel with a "150" coating weight and a "1500" material strength supplied by "ArcelorMittal," *i.e.*, USIBOR 1500 AS 150, the only aluminized PHS product ArcelorMittal offers with these characteristics. CX-0349C ([redacted]); CX-0561C.0008; Tr. (Krishnan) at 181:25–185:9; Tr. (LeBlanc) at 345:3–7 (ArcelorMittal's PHS products include USIBOR 1500, USIBOR 2000, DUCTIBOR 500, DUCTIBOR 1000); Tr. (Thirion) at 86:1–7 ("USIBOR 1500…mean[s] that we reach 1500 Mega Pascals on the final product").

(iii) [redacted]

For the [redacted] reinforcement, VinFast wrongly contends "evidence shows the underlying steel substrate is not Usibor, Ductibor, or Ultralume." VFOpB at 154. Evidence from [redacted] and ArcelorMittal's sales data in fact show the part is made from USIBOR 1500 with an AS 150 coating weight. *See* AMOpB at 24–25; CX-0341C; CX-0663C [redacted]); CDX-0002C.09 (citing CX-0154C) ("AL70/70" corresponds to AS 150); RX-1273C (Pepper) at 59:1–60:13 [redacted]); *id.* at 81:10–13. Mr. Malackowski, moreover, explained this evidence.

[redacted]

Tr. (Malackowski) at 402:21–404:10, 439:12–25.

VinFast attempts to obfuscate by referring to Mr. Malackowski's summary exhibit of names for USIBOR 1500 (CX-0157C), and claiming it does not include [redacted] material specification, [redacted] VFOpB at 154. But the summary exhibit (and the ArcelorMittal sales data upon which it relies) *does* list the [redacted][21] as an example of USIBOR 1500. *See* CX-0157C.0002 (listing [redacted]); *see also* CX-0663 ([redacted]

[redacted]

VinFast's obfuscation continues when it argues that [redacted] witness said "much of his testimony was guess work." VFOpB at 154.[22] That is a mischaracterization: The purported "guess" pertained to a question about rent for [redacted] facility, not the material for the [redacted] part. RX-1273C (Pepper) at 82:5–22. But even as to the rent, the witness explained his "guess" was a "scientific" one "based on information [he was] familiar with." *Id.* at 123:14-21.

(iv) [redacted]

VinFast claims that because certain of the welded blanks that form part of the [redacted] were manufactured at ArcelorMittal's Dofasco facility in Ontario, "the testing of this part does not bear on precursor material manufactured at AM/NS Calvert or [redacted] VFOpB at 154–55. But the [redacted] is made of multiple tailor-welded blanks composed of USIBOR 1500 and DUCTIBOR 500 with a coating weight of AS 150, and certain sub-parts that form the ring *are* manufactured at Calvert, while others are manufactured at Dofasco. *See* AMOpB at 26–28. Importantly, the entire ring is *hot stamped in*

[21] The [redacted] *See* CX-0154C; CX-0663C ([redacted]); Tr. (LeBlanc) at 344:10–347:23 ([redacted]).

[22] VinFast did not designate the testimony it cites, so the argument can be stricken. *Compare* VFOpB at 154 *with* RX-1273C (Pepper) at 82.

[redacted]

the U.S. using licensed steel and *necessarily includes* DI Precursor Products; it cannot be manufactured without welded blanks from Calvert. *Id.* at 27–28; RX-1286C (Belanger) at 18:3–8, 26:3–17, 29:11–22; CX-0320C.0003 ¶ 5 ([redacted]); Tr. (Malackowski) at 369:13–19; *Certain Beverage Brewing Capsules*, 2019 WL 10630509, at *115–16 ("[T]he '320 patent cannot be practiced without the brewing capsule as well as the brewing machine."). Thus, investments in the [redacted] are cognizable.

(v) [redacted]

VinFast's argument as to [redacted] (four of which Dr. Fekete tested) is likewise meritless. Evidence produced by ArcelorMittal and [redacted] confirms the [redacted] are made from USIBOR and DUCTIBOR manufactured at Calvert. *See* AMOpB at 25–26. There is no evidence to the contrary. VinFast falsely claims ArcelorMittal did not present "*any* evidence" on this point, but as discussed in ArcelorMittal's opening brief, Simwon produced mill certificates confirming the rings are made of DUCTIBOR 1000 and USIBOR 1500 with an AS 150 coating weight. VFOpB at 155; AMOpB at 25–26; *see also* CX-0402C. ArcelorMittal's sales data corroborates this evidence. CX-0663C [redacted]). During the hearing, Mr. Richards, CEO of AM/NS Calvert, explained the content of a mill test certificate (and how to identify the product and the coating weight); Mr. Malackowski also testified that he was "able to confirm" the corresponding precursor product for all Tested DI Direct Products. Tr. (Richards) at 318:15–319:23 (discussing CX-0635C); Tr. (Malackowski) at 404:5–17 (discussing RDX001.43).

(vi) [redacted]

VinFast again falsely claims ArcelorMittal did not present "*any* evidence" to show the precursor product used for [redacted] and that the "documentation likewise does not identify the precursor material." VFOpB at 155. As explained in ArcelorMittal's

[redacted]

opening brief, ArcelorMittal's and [redacted] data confirms [redacted] is a [redacted] made from USIBOR 1500 AS 150 manufactured at Calvert, and hot stamped at [redacted] facility. AMOpB at 28; CX-0663C ([redacted]); RX-1279C (Chronister) at 77:5–24, 78:18–20 (explaining CX-0443C); CX-0443C ([redacted]); CX-0446C ([redacted]).

(vii) [redacted]

As with the [redacted] part above, VinFast incorrectly claims ArcelorMittal did not present "*any* evidence" to show the precursor product used for [redacted] and that the "documentation likewise does not identify the precursor material." VFOpB at 155. ArcelorMittal's sales data confirms [redacted][24] is a [redacted] made from USIBOR 1500 AS 150 manufactured at Calvert, and hot stamped at [redacted] facility. AMOpB at 28–29; CX-0663C ([redacted]); CDX-0002.09 (citing CX-0154C) (AS 60 coating weight corresponds to AS 150). Having identified no evidence to the contrary, VinFast's challenge to [redacted] status as a DI Direct Product fails.

c) VinFast Ignores the Evidence Linking the DI Precursor Products to the Asserted Patents (Response to VFOpB § IV.B.1.iii)

VinFast next insinuates, without supporting expert analysis, that the DI Precursor Products,

[23] The [redacted]. CX-0157C.

[24] The prefix for this part number is slightly different between the tested part and the sales data, but the part number is identical and VinFast has identified no evidence that the [redacted] part in ArcelorMittal's spreadsheet is not the same part as the tested part. AMOpB at 28–29.

[25] [redacted]. CX-0157C.

[redacted]

i.e., USIBOR and DUCTIBOR, are not "representative" of one another and that therefore hot stamping of DUCTIBOR cannot result in practicing product. *See* VFOpB at 157–58. But the so-called "material differences" that VinFast identifies between USIBOR and DUCTIBOR, when applied to the hot-stamped ("Direct") products affect only five ***dependent*** claims of the 26 asserted Domestic Industry Claims, *e.g.*, strength and carbon content of the base steel. As explained above with respect to Dr. Fekete's presentation regarding technical domestic industry, that the DUCTIBOR parts are covered by multiple asserted claims stands largely undisputed. *Supra* § II.B. It is also undisputed, based on the testimony of multiple witnesses, that DUCTIBOR, like USIBOR, is specifically intended to be hot stamped. *E.g.*, Tr. (Thirion) at 87:3–88:22 ("Usibor is a product dedicated to hot stamping…Ductibor is also a product for hot-stamping coated with aluminum silicone."); Tr. (Atkinson) at 237:4–7 (the "products...that are hot-stamped" are "the Usibor and Ductibor products"); Tr. (LeBlanc) at 335:6–336:21 (ArcelorMittal sells USIBOR and DUCTIBOR, shown on CDX-0007C.2, "with the intent that they be hot-stamped"). USIBOR and DUCTIBOR are tailored so that hot stamping results in products that practice the Asserted Patents—an intention that is reflected in ArcelorMittal's licensing agreements. *E.g.*, Tr. (LeBlanc) at 339:8–340:22 (Calvert is "licensed to make the Usibor and Ductibor products" under a license to the patents "ArcelorMittal has accused VinFast of infringing"); CX-0031C.041, .0040, .0065, .0069; CX-0034C.0002, .0005 (license to "Ductibor Steel Products [that] are sold to be able to be processed as per UPP Patents" including the Asserted Patents ("US App 16/413,774" and "any related patent")).

The Tested DI Direct Products illustrate how both USIBOR and DUCTIBOR are tailored for use in products that practice the Asserted Patents. As described *supra*, the [redacted] are made of laser welded blanks of ***both*** USIBOR ***and***

[redacted]

DUCTIBOR. *Supra* §§ IV.B.1.b. As explained in ArcelorMittal's opening brief and above, these [redacted] practice the Asserted Patents. *See* AMOpB at §§ III.B, IV.B; *supra* § II.B, III.B. USIBOR and DUCTIBOR are thus both "sub-components" "incorporated into products that practice the patents at issue." VFOpB at 151 (citing *Certain Integrated Repeaters, Switches, Transceivers, & Prods. Containing Same*, Inv. No. 337-TA-435, 2001 WL1769747, at *19 (July 19, 2001)); *see also Beverage Brewing Capsules*, 2019 WL 10630509, at *115–16; *Computer Network Sec. Equip. & Sys.*, 2023 WL 5744218, at *46–47. They are therefore precursor products properly considered in the domestic industry. *See Motorola Mobility*, 737 F.3d at 1351.[26]

d) The Record Evidence Shows Quantitatively Significant Investments in DI Precursor Products (Response to VFOpB § IV.B.3)

VinFast attacks the quantitative significance of the DI Precursor Product investments in three ways; the evidence rebuts each attack. *First*, the evidence and law support Mr. Malackowski's quantification (including apportionment) of investments at Calvert—and the significance of those investments—based on the DI Precursor Products via the DI Precursor Product Apportionment Method. *Second*, VinFast argues only investments for the Tested DI Direct Products count; even under this argument, the record still shows quantitatively large investments. *Third*, Mr. Malackowski's analysis of [redacted] investments are based on reasonable assumptions and available evidence and further show a significant domestic industry.

(i) The Investments at Calvert Based on The DI Precursor Product Apportionment Method Are Significant

As discussed above, the DI Precursor Products are "specifically tailored for use in an article

[26] To the extent the ALJ finds the investments should be apportioned between USIBOR 1500 and the rest of the DI Precursor Products, Mr. Malackowski provided the allocation factor for USIBOR 1500 ([redacted]) in CX-0156C. *Supra* n. 20. This apportionment is not necessary because the majority of ArcelorMittal's significance arguments do not depend on summations. *Infra* § IV.C.

[redacted]

protected by the patent," and therefore relevant to the domestic industry. *Motorola Mobility*, 737 F.3d at 1351. VinFast's argument that these investments are overstated therefore fails.

VinFast's critique of these calculations is—in essence—that ArcelorMittal has not tested every product that has ever been made from USIBOR and DUCTIBOR with a coating weight of AS 150 and therefore cannot prove the DI Precursor Products become the DI Direct Products. VFOpB at 150–158. But that is not what the law requires. *See supra* § IV.B.1.a. ArcelorMittal operates using a highly successful manufacturing-licensing business model, where it licenses upstream suppliers—including its own joint venture—to permit widespread authorized manufacture of products that practice the Asserted Patents. Tr. (Malackowski) at 365:11–383:3; Tr. (LeBlanc) 339:8–18, 342:20–23. This is the only practical option for the widespread use of this important, safety-enhancing technology. Under VinFast's misplaced interpretation of the law, to protect this highly successful domestic industry, the patentee would need to conduct an overwhelming—and, frankly, impracticable—amount of third-party discovery. *See, e.g.*, CX-0663C (showing Calvert's customers). Here, that would have required subpoenaing more than 50 entities, testing hundreds of parts, and bringing to the hearing more binders of evidence than could fit in the courtroom. Fortunately, under the actual legal standard, the discovery ArcelorMittal took sufficiently demonstrated that the DI Precursor Products—aluminized USIBOR and DUCTIBOR steel with an AS 150 coating weight—are specifically tailored for use in patented articles.

Using Mr. Malackowski's DI Precursor Product Apportionment Method (*i.e.*, allocating Calvert's investments based on the relative throughput of USIBOR and DUCTIBOR with an AS 150 coating weight), the investment in plant and equipment at Calvert was at least [redacted]; [redacted] in labor (direct and indirect) since [redacted]; and about [redacted]**illion** in capital investments since [redacted]. In sum:

[redacted]

Calvert's Investments under the DI Precursor Product Apportionment Method

	Investment
Plant/equipment	[redacted]
Labor	[redacted]
Capital	[redacted]
Total	[redacted]

CX-0118C, CX-0123C, CX-0468C; Tr. (Malackowski) at 392:10–393:6 (CDX-0002C.34).[27]

Because the DI Precursor Products are specifically tailored for use in patented articles, further apportionment is not necessary. But in an abundance of caution, ArcelorMittal also presented evidence showing the apportioned values for shipments to just the subpoenaed Tier 1s.

Calvert's Investments under the DI Precursor Product Apportionment Method, Further Apportioned to Isolate Investments Related to Subpoenaed Tier 1s

	Investment
Plant/equipment	[redacted]
Labor	[redacted]
Capital	[redacted]
Total	[redacted]

Tr. (Malackowski) at 393:7–394:14 (discussing CDX-0002C.0035); CX-0123C. As discussed above, the evidence shows that the hot-stamped parts these Tier 1s manufacture are more likely than not to practice the Asserted Patents. *Supra* §§ II.B, III.B.

Thus, VinFast's argument that these so-called "primary and alternative methods" to quantify Calvert's investments in the DI Precursor Products are insufficient to meet

[27] VinFast argues that this summation is "overstated because [Mr. Malackowski] relies on acquisition value rather than book value." VFOpB at 162. VinFast cites no legal authority in support of its argument, which is, again, not grounded in the law. The Commission has upheld the use of acquisition value as a permissible way to calculate the investments attributable to an asset and, in fact, "rejected outright the use of depreciated values in a domestic industry analysis." *Certain UV Curable Coatings for Optical Fibers, Coated Optical Fibers*, Inv. No. 337-TA-1031, ID, at 198–200 (Mar. 15, 2018); *see also Certain Elec. Devices with Image Processing Sys.*, Inv. No. 337-TA-724, Ord. No. 29, 2011 WL 1336531, at *6, *10 (Mar. 11, 2011) (granting summary determination that an economic domestic industry existed); *Computer Network Sec. Equip & Sys.*, 2023 WL 5744218, at *139 n.118 (rejecting VinFast's approach).

[redacted]

ArcelorMittal's burden fail. VFOpB at 160.

(ii) Even Accepting VinFast's Non-Representativeness Argument, The Investments in DI Precursor Products Are Still Significant

VinFast argues ArcelorMittal's expert's apportionment methodology is improper because it allegedly does not directly link the investment at Calvert to the Tested DI Direct Products. VinFast overlooks a glaring fact established, and unrebutted, at trial: Calvert could not convert a steel slab into even a single coil of a DI Precursor Product without investing in at least three complete manufacturing lines: [redacted] Tr. (Richards) at 314:15–17, 315:23–25, 317:4–6; CDX-0002C.31 (Row 3; summarizing CX-0125C and CX-0150C); CX-0688C; Tr. (Malackowski) at 388:11–389:8 (discussing CDX-0002.31). The investment for fixed assets in the relevant areas—for these three lines needed for the DI Precursor Products—was [redacted]. Mr. Malackowski identified this investment at the hearing. Tr. (Malackowski) at 388:11–389:8 (discussing CDX-0002C.31); CDX-0002C.31 (Row 3, citing CX-0125C). The law requires no further apportionment, and VinFast has raised no coherent legal or factual argument for dismissing this quantification of necessary investments. *Magnetic Data Storage Tapes*, 2018 WL 8648372, at *73–74; *Certain Biometric Scanning Devices*, 2011 WL 1686363, at *4. Instead, VinFast attempts to pick at the edges of Mr. Malackowski's extremely conservative allocation of these investments, which goes well beyond what is required under *Magnetic Data Storage Tapes*, to apportion them down specifically to the DI Precursor Products.[28] In view of the Commission's decision in *Magnetic Data Storage Tapes*, the inquiry should end here—with the undisputed [redacted] investment in plant and equipment required to make the DI Precursor Products

[28] VinFast's challenge to the investment in plant and equipment at Calvert using the DI Precursor Product Apportionment Method should be rejected for this additional reason.

[redacted]

from which the subpoenaed Tier 1 manufactured the Tested DI Direct Products.

VinFast next refers to Mr. Malackowski's identification of [redacted] in investments at Calvert attributable to certain tested parts from [redacted] and argues that this investment fails to "separate the investments between sub-prongs (A) and (B)" and is about "three times too high." VFOpB at 161–62 (referring to CX-0122C). Preliminarily, and for context, this quantification (and thus VinFast's argument) is irrelevant to ArcelorMittal's separate independent showings that (1) the DI Precursor Products are specifically tailored for use in patented articles (such that the entire [redacted] investment counts), (2) the hot-stamped parts made by the subpoenaed Tier 1s are more likely than not to practice the Asserted Patents (such that the [redacted] investment at Calvert allocable to those Tier 1s counts), and (3) under *Magnetic Data Storage Tapes*, the entire investment in plant and equipment needed to make DI Precursor Products used in the Tested DI Direct Products is cognizable (such that the [redacted] investment in the relevant manufacturing lines counts). VinFast must rebut (it has not) ArcelorMittal's evidentiary and legal showings in each of these three categories to even get to this analysis.

But *even if* this fourth layer of analysis is reached, the [redacted] quantification is understated. Specifically, the [redacted] assumes only one of [redacted] manufactured parts practices the Asserted Patents (based on the testing data available in the days before Mr. Malackowski's expert report was due), but ArcelorMittal demonstrated at the hearing that all four [redacted] parts practice the Asserted Patents, and that these are the only four hot-stamped aluminized parts [redacted] makes, such that an allocation based on the entirety of the DI Precursor Products shipped to [redacted] of Calvert DI Precursor Product shipments) is appropriate. *Supra* §§ II.B, III.B; CX-0242C; RX-1283C (Hong) at 13–16; CX-0401C; Tr. (Malackowski) at 422:3–424:3, 425:21–426:25 (discussing CX-0122C). Thus, the actual investment at Calvert

[redacted]

allocable to the tested [redacted] parts (which can be divided between sub-prongs (A) and (B) using Mr. Malackowski's schedules) is not [redacted], but [redacted]:

Investments at Calvert Apportioned to Tested DI Direct Products[29]

Tested Product	Allocation Factor[30]	Plant/Equipment	Labor	Capital	Total
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total	---	[redacted]	[redacted]	[redacted]	[redacted]

As to the understated [redacted] summation, VinFast argues that this number is "three times too high," but cites no actual evidence for this argument. VFOpB at 161. Indeed, VinFast's economist made this very argument—and essentially *only* this argument—in her report, but VinFast chose not to call her to present these opinions or analysis, most likely because they are highly flawed, in addition to ignoring that ArcelorMittal presented four patent-practicing [redacted] parts instead of one, yielding, under this unpresented, flawed argument a [redacted] investment (based on the percentages in the table above, reflecting the actual share of steel attributable to [redacted], to [redacted] in investment allocable to the subpoenaed Tier 1s).[31]

(iii) The Quantified Investments at [redacted] Further Show a Significant Domestic Industry

As to [redacted], VinFast argues "ArcelorMittal and its experts do not rely on a quantification of investments of the DI Precursor Product allegedly produced by [redacted]

[29] AMOpB at 135–37.

[30] The sources for each allocation factor are discussed in detail in AMOpB at 137 & nn. 28–30.

[31] Even accepting VinFast's unduly discounted [redacted] as the proper investment at Calvert, which is still a quantitatively large investment standing alone, this amount is plainly not the total investment in the domestic industry, and in context is actually indicative of larger investments.

[redacted]

called Ultralume in support of its domestic industry theory." VFOpB at 163. VinFast is half right. None of ArcelorMittal's arguments for quantitative or qualitative significance *depend* on including investments by [redacted], which licenses the Asserted Patents and makes the Ultralume product under that license. *See* Tr. (LeBlanc) at 340:23–341:22; Tr. (Malackowski) at 394:15–397:13. However, ArcelorMittal has presented evidence of [redacted] DI Precursor Product investment of [redacted], which is *further* evidence of quantitatively large investment in the domestic industry for the Asserted Patents. AMOpB at 140–42. Under any summation, the evidence shows quantitatively large investments in DI Precursor Products.

2. The Record Shows Significant Investments for The DI Direct Products (Response to IV.B.2, IV.B.4)

As to the sum of investments by the subpoenaed Tier 1s in DI Direct Products, VinFast tries to avoid the extensive investments from the subpoenaed Tier 1 manufacturers by arguing the "tested products are not representative of other 'untested products.'" VFOpB at 159. This argument fails because (1) at least for the subpoenaed Tier 1s, the Tested DI Direct Products *do* in fact show, at least by a preponderance of the evidence, that other products manufactured by the Tier 1s using DI Precursor Products practice the Asserted Patents, such that the DI Precursor Apportionment Method properly measures the investments, and (2) even if the ALJ finds were to find the Tested DI Direct Products have no bearing on whether other of the Tier 1s' products practice the Asserted Patents, the evidence shows significant investments required to manufacture the Tested DI Direct Products, under either the *Magnetic Data Storage Tapes* Method or Tested DI Precursor Product Allocation Method.

a) The Evidence Supports Apportioning Tier 1s' Investments Based on DI Precursor Products

VinFast again imparts an unduly strict evidentiary burden unsupported by precedent. ArcelorMittal tested 15 hot stamped parts made from DI Precursor Products or otherwise licensed

[redacted]

steel with an AS 150 coating weight; 12 of those parts (80 percent) practice the Asserted Patents. As discussed above, ArcelorMittal showed the hot-stamped parts made by the subpoenaed Tier 1s using the DI Precursor Products are more likely than not to practice the Asserted Patents. *Supra* §§ II.B, III.B. Their investments related to converting the DI Precursor Products into DI Direct Products are thus properly included in Mr. Malackowski's DI Precursor Product Method of allocating investments. Even excluding [redacted] investments, the remaining subpoenaed Tier 1s' ([redacted]) invested [redacted] in plant and equipment and [redacted] in labor and capital to convert the DI Precursor Products into DI Direct Products. AMOpB §§ V.B.1–5, V.D.1; *see also* CX-0118C; CX-0468C (errata).

b) The Subpoenaed Tier 1s' Investments in The DI Direct Products Are Significant Even if VinFast's Non-Representativeness Argument Is Credited

Even accepting VinFast's argument that the Tested DI Direct Products are not representative of other parts from the subpoenaed Tier 1s, the record evidence still shows significant investments. For example, under the *Magnetic Data Storage Tapes* Method, the record evidence shows that at least [redacted] of investment in plant and equipment and [redacted] of investment in labor and capital was required to manufacture the Tested DI Direct Products at [redacted]. AMOpB §§ V.B.1–5, V.D.1.

Investment in Plant & Equipment Needed to Manufacture Tested DI Direct Products

Manufacturer	Investment
[redacted]	[redacted] (plant and equipment)
[redacted]	[redacted] (equipment)
[redacted]	[redacted] (equipment)
[redacted]	[redacted] (plant and equipment)
[redacted]	[redacted] (equipment)
Total	[redacted]

Mr. Malackowski's detailed analysis identified, *e.g.*, specific investments in hot-stamping

[redacted]

lines and facilities, and the extensive evidence in the record, including from the Tier 1s themselves, confirmed these investments in plant and equipment were necessary to make the Tested DI Direct Products. AMOpB §§ V.B.1–5, V.D.1.

ArcelorMittal reiterates that the Tested DI Direct Product Allocation Method is completely unnecessary under Commission precedent, and need only be reached if the ALJ concludes both (1) that the other untested parts made from DI Precursor Products by [redacted] more than likely *do not* practice the Asserted Patents and (2) that *Magnetic Data Storage Tapes* does not apply here. Out of an abundance of caution, ArcelorMittal thus identifies the record evidence under this hypothetical scenario. For [redacted], the evidence shows the portion of their aluminized steel production that each Tested DI Direct Product accounts for, such that their respective apportioned plant and equipment investments for the Tested DI Direct Products are readily discernible. AMOpB §§ V.B.1–5, V.D.1.

- [redacted]**:** As to the tested [redacted] parts, the [redacted] and [redacted], Mr. Malackowski calculated that the parts account for [redacted] of [redacted] aluminized part volume, respectively. CX-0206C. Applying these percentages to the unallocated equipment investments at the respective facilities ([redacted]), the investments in equipment apportioned to these parts alone is [redacted] CX-0183C; CX-0196.

- [redacted]**:** The four tested [redacted] represent [redacted] of the hot stamped aluminized parts [redacted] produces at its [redacted] facility. CX-0242C; RX-1283C (Hong) at 16:7–10 [redacted]; CX-0401C. Mr. Malackowski identified [redacted] in plant and equipment for hot stamping aluminized steel at [redacted] in equipment, [redacted] in plant) for a [redacted] of which is allocable to the four tested [redacted]. CX-0227C (equipment); CX-0228C (plant); Tr. (Malackowski) at 405:17–406:7 (discussing CDX-0002C.48); *supra* § IV.B.1.d.ii ([redacted] allocation factor).

- [redacted] As to the tested [redacted] part, [redacted]-X, Mr. Malackowski calculated it represents [redacted] of [redacted] production. CX-0265C. Mr. Malackowski calculated that the investment in equipment apportioned to this part alone is [redacted] CX-0247C (equipment); Tr. (Malackowski) at 404:18–406:11 (discussing CDX-0002C.48).

[redacted]

Because total production volumes are necessary to calculate the percentage of production attributable to the tested parts and this information was not available for [redacted], the Tested DI Direct Product Allocation method is not possible for those Tier 1s. In sum:

Apportioned to the Tested DI Direct Products
(limited to parts where portion of Tier 1's total production known)

Manufacturer	Investment
[redacted]	Excluded due to nature of evidence
[redacted]	[redacted] (equipment)
[redacted]	Excluded due to nature of evidence
[redacted]	[redacted] (plant and equipment)
[redacted]	[redacted] (equipment)
Total	[redacted] **(plant and equipment)**

For labor and capital in this scenario, the record again includes evidence that readily allows allocation to the Tested DI Direct Products from [redacted]. Specifically, applying the same percentages:

- [redacted]: As to the tested [redacted] parts, the [redacted] and [redacted], the investments in labor and capital apportioned to these parts alone is [redacted]. CX-0206C (allocation factor); CX-0188C to CX-0191C ([redacted] – labor); CX-0199C ([redacted] direct labor); CX-201C ([redacted] indirect labor); AMOpB 147–49.

- [redacted]: As to [redacted], Mr. Malackowski identified [redacted] investment in labor and capital for hot stamping aluminized steel at [redacted] facility for a single year, [redacted] in labor and [redacted] in capital). CX-0234C (labor); CX-0235C to CX-0237C (capital); Tr. (Malackowski) at 404:21–406:7 (discussing CDX-0002C.47). Of that investment, [redacted] is attributable to the four tested [redacted]. CX-0242C; RX-1283C (Hong) at 16:7–10; CX-0401C.

- [redacted]: As to the tested [redacted] part, [redacted], Mr. Malackowski calculated that the investment in labor and capital attributable to this part alone is [redacted]. CX-0265C (allocation factor); CX-0249C (labor); CX-0262C (capital); Tr. (Malackowski) at 404:21–406:7 (discussing CDX-0002C.48.

In sum:

Investment in Labor and Capital Needed to Manufacture Tested DI Direct Products
(limited to parts where portion of Tier 1's total production known)

Manufacturer	Investment
[redacted]	[redacted] (labor)

[redacted]

[redacted]	[redacted] (labor and capital)
[redacted]	[redacted] (labor and capital)
Total	[redacted] **(labor and capital)**

VinFast raises a number of distinct challenges questioning the evidence produced by the Tier 1s and Mr. Malackowski's quantitication of those investments. VFOpB at 163–69. In each instance, VinFast stops short of identifying how its challenge would actually impact the summation. However, even if VinFast's arguments were credited, the investments would still be extensive. Indeed, even focusing on just seven of the Tested DI Direct Products and apportioning equipment, the investments (as set forth above) still total [redacted], which is indicative of the far greater investments at [redacted], as well as the other subpoenaed Tier 1 manufacturers and Tier 1s industrywide. In any event, VinFast's chief complaint appears to be that the Tier 1s do not keep records in a manner that maps precisely onto the technical and legal issues in this case. But such perfect precision is not required, and Mr. Malackowski's summations are reasonable. *Certain Elec. Devices, Including Mobile Phones, Portable Music Players, & Computs.*, Inv. No. 337-TA-701, Ord. No. 58, 2010 WL 5621540, at *3 (Nov. 18, 2010) (observing that records are often kept in a manner that is not conducive to their use in litigation); *Certain Mobile Device Holders*, Inv. No. 337-TA-1028, Comm'n Op., 2018 WL 4042764, at *9 (Mar. 22, 2018) (concluding reasonable estimates of investments are acceptable).

* * *

Thus, whether the ALJ agrees the evidence shows that other hot-stamped parts made by the subpoenaed Tier 1s using DI Precursor Products are more likely than not to practice the Asserted Patents or accepts VinFast's argument that only investments for the Tested DI Direct Products should count, the evidence shows significant investments by the subpoenaed Tier 1s.

[redacted]

C. The Investments in The Domestic Industry Are Significant

As mentioned, VinFast does not challenge the qualitative significance of ArcelorMittal's investments. *Supra* § IV. This issue is addressed in ArcelorMittal's opening brief and VinFast does not challenge this showing, so the issue is not addressed again here. AMOpB at 170–71. VinFast instead argues that "ArcelorMittal has failed to provide [a] comparative analysis showing that the alleged domestic industry investments are significant or substantial in context." VFOpB at 172. That is wrong as reiterated below.

The ER&D Investments Are Significant. As to the ER&D investments, Mr. Malackowski compared ArcelorMittal's investments in ER&D related to press-hardened steel (the broader category into which the DI Products fit) and USIBOR and DUCTIBOR (both of which, with a sufficient coating weight, are DI Precursor Products) in the United States to ArcelorMittal's investments in the same product grouping worldwide. Tr. (Malackowski) at 417:15–418:3; CDX-0002C.56; CX-0275C; CX-0276C; CX-0668C; CX-0687C. Mr. Malackowski explained that this comparison shows that ArcelorMittal's investments are substantial in at least two ways. First, Mr. Malackowski explained that "relatively speaking, the ER&D labor in the US has been growing as a percentage of [the] total from just over [redacted] to over or approximately [redacted] to date." Tr. (Malackowski) at 417:22–25; *Lelo Inc. v. Int'l Trade Comm'n*, 786 F.3d 879, 883 (Fed. Cir. 2015) ("[T]he terms 'significant' and 'substantial' refer to an increase in quantity, or to a benchmark in numbers."). Second, Mr. Malackowski explained that "in an absolute level, we can see that there's significant activity that's occurring in the US as opposed to elsewhere." Tr. (Malackowski) at 418:1–3. In response, VinFast nakedly states that "no basis exists for concluding that ER&D attributable to Usibor, Ductibor, and PHS...has a nexus to the asserted patent." VFOpB at 172. But, ArcelorMittal in fact presented extensive evidence of the close relationship of the ER&D to exploiting articles protected by the Asserted Patents, and VinFast has provided no

[redacted]

rebuttal to this evidence. AMOpB 162–65, 175–76.

VinFast's additional arguments essentially seek to penalize ArcelorMittal for also having substantial operations outside the technology of the Asserted Patents and for having operations outside the U.S. VFOpB at 170–73. But the Commission's domestic industry precedent is clear: large companies are not excluded simply because they offer diverse products or also do business abroad. *Certain Carburetors & Prods.*, Inv. No. 337-TA-1123, Comm'n Op., 2019 WL 5622443, at *18–19 (Oct. 28, 2019) ("The fact that a complainant may have substantial sales of other products is not pertinent to this analysis. Accordingly, we decline to adopt the ID's statement that 'large multinational companies should be expected to invest larger dollar amounts in order for their investments to be deemed "significant" or "substantial."'"); *Certain Elec. Devices, Including Wireless Commc'n Devices, Portable Music & Data Processing Devices, & Tablet Computs.*, Inv. No. 337-TA-794, ID, 2012 WL 4752221, at *322 (Sept. 14, 2012) (complainants are not required to show "expenditures are substantial in the context of its own operations," because "such a comparison would hurt large, diversified companies that produce a wide range of products"). VinFast's comparison to ArcelorMittal's "worldwide R&D budget"—and apparent assumption that this must serve as a comparator to show significance—is unsupported by the law and evidence, and should be rejected. VFOpB at 172. ArcelorMittal's [redacted] in ER&D investment is quantitatively significant. *Certain Filament Light-Emitting Diodes & Prods. (II)*, 2021 WL 6102808, at *114–15 ($7.3 million in ER&D was quantitatively substantial).

The Plant & Equipment and Labor & Capital Investments Are Significant. As explained above in Section IV, regarding the investments in plant and equipment under § 1337(a)(3)(A) and labor and capital under § 1337(a)(3)(B), ArcelorMittal has demonstrated that the investments are quantitatively significant in four independent but complementary analyses:

[redacted]

1. Because they add value to the products in the form of high profitability relative to other steel products. *See also* AMOpB at 171–73.

2. Because they add significant value to the products considering the costs incurred in the U.S. to manufacture and produce the patented articles, as compared to the costs unrelated to investment in the U.S. *See also* AMOpB at 171–72, 173–74.

3. Considering the production of PHS in the U.S. versus the rest of the world as compared to steel production in general in the U.S. versus the rest of the world. *See also* AMOpB at 174–75.

4. Standing alone in light of the magnitude of investment. *See also* AMOpB at 166–70.

Only the fourth analysis depends on the overall summation of investments discussed above.

Value add (analyses 1 and 2). VinFast fails to rebut either value-add analysis, which is an established form of analysis for proving quantitative significance. *Lelo*, 786 F.3d at 884 ("[I]n *Certain Male Prophylactics*, the ITC examined the economic impact of subcontractor domestic operations noting that, among other things, those operations reflected a U.S. value added of 34 percent."); *Certain Beverage Dispensing Sys.*, Inv. No. 337-TA-1130, Comm'n Determination, 2020 WL 8675357, at *127 (June 1, 2020) ("According to Commission precedent, a value-added analysis is a useful tool for evaluating whether a domestic industry exists.") (citing *Certain Woodworking Machs.*, Inv. No. 337-TA-174, Notice of Termination, 1987 WL 1564200, at *99 (May 1, 1987) (finding significance where "between 30 and 40% of the dollar value of the machine [was] produced in the United States")). For example, in *Certain Male Prophylactic Devices*, the Commission found economic significance after considering the per-unit cost of imported goods ("imported bulk condoms") as compared to per-unit value-add costs associated with domestic processing activities ("lubricating, foiling, and testing"), which amounted to 34% of the per-unit cost, and thus a 34% value add. Comm'n Op., Inv. No. 337-TA-546, Comm'n Determination, 2008 WL 2952724, at *26–27 (Aug. 1, 2007). The Federal Circuit approved of this form of quantitative analysis in *Lelo*. 786 F.3d at 884.

[redacted]

Here, Mr. Malackowski showed that, although all Calvert's products are made from steel slabs, which are commodities, USIBOR and DUCTIBOR realized contribution (profit) margins per metric ton of [redacted], as compared to [redacted] per metric ton for other automotive steel (excluding aluminized) and [redacted] per metric ton for non-automotive steel, demonstrating the value added to those products in the manufacturing process at Calvert. Tr. (Malackowski) at 415:19–416:11; CDX-0002C.54; CX-0662C; CX-0277C.

Considering the costs incurred in the U.S. for the DI Precursor Products, Mr. Malackowski explained that ArcelorMittal's domestic processing of the steel at the AM/NS Calvert facility amounted to [redacted] of the cost to sell USIBOR and DUCTIBOR, such that on a cost basis, there is a [redacted] **domestic value add** for the DI Precursor Products. Tr. (Malackowski) at 416:12–417:14; CDX-0002C.55; CX-0278C; CX-0279C; Tr. (Richards) at 307:23– 319:23 (explaining how steel slabs are converted into USIBOR and DUCTIBOR coils); CX-0664C; *Lelo*, 786 F.3d at 884; *Certain Male Prophylactic Devices*, 2008 WL 2952724, at *26–27. For the DI Direct Products, Mr. Malackowski showed with respect to a "fairly typical" cost breakdown that the U.S. investment amounted to a [redacted] **value add**. Tr. (Malackowski) at 416:12–417:14; CDX-0002C.55; CX-0280C; CX-0281C; CX-0354C; RX-1277C (Webb) at 76:6–84:6.

U.S. vs. worldwide (analysis 3). Mr. Malackowski concluded that the relative share of PHS production in the U.S. is "more than [redacted] on a percentage basis" compared to overall steel production worldwide. Tr. (Malackowski) at 417:15–418:22; CDX-0002C.56–57; CX0790; CX-0489C; CX-0152C. Mr. Malackowski further explained that this greater relative share of PHS production in the U.S. compared to steel generally "speaks to the significance of what's happening here from an economic domestic industry standpoint." Tr. (Malackowski) at 418:16–18. VinFast again has no answer or rebuttal to this analysis, other than to compare apples and oranges. For

[redacted]

example, VinFast argues that ArcelorMittal's "global operations dwarf the alleged domestic industry investments" because ArcelorMittal is allegedly "a large conglomerate with revenues over [redacted]." VFOpB at 172. ArcelorMittal does not dispute that it is a large, successful company, but there is no legal basis for VinFast to insist on using ArcelorMittal's worldwide success (and diverse steel offerings) as the comparator for the domestic investments for the two Asserted Patents; and that is not ArcelorMittal's argument. Rather, the relatively large volume of DI Products manufactured in the U.S. shows the significance of ArcelorMittal's U.S. investments.

Outright quantitative significance (analysis 4). Even as to the final analysis, as discussed above and in ArcelorMittal's opening brief, the investments are objectively quantitatively significant under any method supported by the evidence, totaling:

- **Under the DI Precursor Apportionment Method:** [redacted] in apportioned investments in plant and equipment[32] and [redacted] in labor and capital.[33] Tr. (Malackowski) at 413:10–414:11, 427:5–14; CDX.0002C.25; CX-0118C; CX-0468C.
- **Under the *Magnetic Data Storage Tapes* Method:** [redacted] in investment in plant and equipment and [redacted] in labor and capital. AMOpB at 167.
- **Under the Tested DI Product Allocation Method:** [redacted] in plant and equipment and [redacted] in labor and capital. AMOpB 169–70.

VinFast has no rebuttal to the significance of these numbers. It simply argues that the methods of adding them up are not supported by the evidence, which ArcelorMittal demonstrated is wrong. *Supra* § IV.B. VinFast argues that the investments apportioned to the "'tested' products under Mr. Malackowski's alternative allocation methods," referring to the [redacted] or [redacted] investment, are not "significant or substantial." VFOpB at 170–71. That is incorrect. To

[32] This excludes [redacted] in their respective plant and equipment investments. AMOpB at 168 n.37.

[33] This excludes [redacted] in their respective labor investments. AMOpB at 168 n.38.

[redacted]

be clear, this is a third-string argument, as the law does not require apportionment only to the tested parts for the reasons above. Nor is the total summation of investments—which is drastically underinclusive under any of the three summation methods discussed above—necessary to determine significance, given the additional analyses of significance. *Certain Disposable Vaporizer Devices*, 2024 WL 5378663, at *19 ("[C]omplainant does not need to show any 'minimum monetary expenditure,' and a complainant does not 'need to define or quantify the industry itself in absolute mathematical terms." (citing *Certain Stringed Musical Instruments*, 2009 WL 5134139, at *16)).

But if the ALJ reaches this issue, Mr. Malackowski explained that "even though it's limited to just a few number of parts, the investments are still significant." Tr. (Malackowski) at 406:10–11. As discussed below, Mr. Malackowski's opinions were timely disclosed, and VinFast's motion to strike must be denied. *Infra* § V. But even if Mr. Malackowski's ultimate opinions on the significance of the investments for the tested parts are stricken, the numbers, well into the millions, speak for themselves. They indicate objectively quantitatively significant domestic investments in the patented articles and point to the existence of extensive, far greater investments in the domestic industry, which together with ArcelorMittal's unchallenged showing of qualitative significance, easily satisfies § 1337(a)(3)(A) and (B).

V. VINFAST MOTION TO STRIKE

VinFast moves to strike what it asserts are "two new significance opinions" from Mr. Malackowski regarding (1) investments in the Tested DI Direct Products from particular Tier 1 manufacturers and (2) Calvert's investment in DI Precursor Products attributable only to the Tested DI Direct Products. VFOpB at 173–77. Both arguments fail.

As an initial matter, VinFast was only given leave to move to strike Mr. Malackowski's

[redacted]

opinion on the "significance point." Tr. (counsel and Judge Bhattacharyya) at 411:21–412:7; *id.* at 1190:14–21 (the "one issue" VinFast identified for its motion to strike "was the significance issue for [M]r. Malackowski"). Thus, the actual quantifications—*i.e.*, the math—summing investments for the Tested DI Direct Products are not at issue, as the ALJ granted VinFast leave to move to strike Mr. Malackowski's opinion on the "significance point" alone. Accordingly, VinFast has no objection (nor could it) to quantifying the investments in the Tested DI Direct Products (and corresponding DI Precursor Products) using Mr. Malackowski's schedules.[34]

VinFast appears to base its motion to strike on allegations regarding the timeliness of Mr. Malackowski's opinions that the investments (1) at Calvert and (2) at [redacted], after being allocated to certain Tested DI Direct Products and quantified, are *significant*. This question is largely irrelevant in view of the multiple significance opinions Mr. Malackowski offered that are independent of quantifying the investments and the fact that—with or without expert testimony—the significance of the investments in question is readily apparent. *Supra* § IV.C. In any case, Mr. Malackowski timely offered the opinions on significance opinions in question, and VinFast's motion should be denied.

A. Calvert Investments

As to Mr. Malackowski's opinions regarding the significance of the [redacted] figure apportioning three Tested DI Direct Products to Calvert's investments, VinFast claims that Mr.

[34] VinFast identifies 405:17–412:9 and 424:8–425:19 as the portions of Mr. Malackowski's testimony subject to its motion to strike. VFOpB at 177. But that portion of the transcript captures testimony that the ALJ has already ruled is admissible. *Compare, e.g.,* Tr. (Malackowski) at 405:17–406:7 (explaining the "quantification" of [redacted] investments in the Tested DI Direct Products) *with* Tr. (Judge Bhattacharyya) at 355:2–18 ("[T]he objection is overruled as to [redacted]. Those calculations are fairly supported by the schedules to the report"). To the extent VinFast's motion is granted, therefore, only the following portions referencing significance should be stricken: Tr. (Malackowski) at 406:8–11, 424:13–15.

[redacted]

Malackowski "did not opine" in his report or at his deposition that "Calvert's [redacted] investment, standing alone [is] significant or substantial," and therefore his testimony to the same is a "new opinion." VFOpB at 175 (citing GR 11.6.3). But this opinion was disclosed in Mr. Malackowski's expert report, at his deposition, and in ArcelorMittal's pre-hearing brief.

First, citing the [redacted] allocation schedule, Mr. Malackowski stated in his report:

> *[T]o the extent the Commission finds that only the DI Precursor Products* sold to the Six Tier 1 Hot Stampers and *made into hot stamped parts (i.e., DI Direct Products) tested by Dr. Fekete … are relevant* for the economic DI analysis, I provide an alternative analysis for the domestic investments in the DI Direct Products. Correspondingly, *AM/NS Calvert's investments in the DI Precursor Products would be reduced. The investments described above are* ***significant*** *on both an absolute basis and when put into context.*

CX-0081C at 9–10 (citing Sections 10.2–10.7 of his report, and CX-0122C (Schedule 3.2.[0])).[35] Mr. Malackowski repeated later "to the extent the Commission only considers those parts that were specifically tested to provide a basis for the economic DI analysis, I have also included those calculations within my Exhibits," citing CX-0122C. CX-0081C at 160, *id.* n. 902.

Further, Mr. Malackowski elaborated on these significance opinions at his deposition, after extensive questioning from VinFast's counsel about CX-0122C. Specifically, Mr. Malackowski stated that CX-0122C was meant to convey that "whether or not if you looked at only six parts, there would still be a *meaningful investment required*." CX-0015C (Malackowski) at 92:17–93:9. He concluded that the [redacted] calculation in CX-0122C was "understated," and that if "someone said go make me these six parts, it would cost you well over [redacted] to have the equipment to do that by any measure" because you "still need the whole line" and "still need the whole facility." *Id.* at 92:17–94:2. Critically, Mr. Malackowski said that even making adjustments

[35] CX-0081C (Mr. Malackowski's report) and CX-0015C (Mr. Malackowski's deposition transcript) were not admitted as exhibits, but are cited as evidence of the timeliness of his opinions. The cited excerpts are attached to the brief.

[redacted]

to CX-0122C "*wouldn't change the conclusion*" regarding significance, particularly in light of "the engineering R&D and all the qualitative evidence." *Id.* at 94:3–94:23. He elaborated that "when you're just talking about six parts" "*the investment required for the first part is* ***extraordinary*** *relative to the average investment for a million parts*, and that's what I'm trying to show here [in CX-0122C]." *Id.* at 95:3–96:18. At the end of the deposition, VinFast's counsel returned to the subject of CX-0122C, and Mr. Malackowski reiterated: "what the analysis reflects is at a high level, looking at the broad categories in each column, *whether or not there's an indication of investment, even associated with 12 parts, in my opinion there is*. In my opinion, the [redacted] *is understated*, and I don't think anyone would disagree that if you were assigned to make 12 parts according to these patents, you would need much greater investment in equipment and labor and engineering than [redacted]." *Id.* at 165:2–166:15. This testimony confirms that Mr. Malackowski has offered an opinion that there is a cognizable, significant "indication of investment, even associated with 12 parts." *Id.*

VinFast never objected to or sought to strike Mr. Malackowski's analysis of the significance of the investment required to manufacture the tested parts at his deposition (and, in fact, repeatedly asked him questions about these opinions). *See* GR 7.1. Moreover, contrary to VinFast's claim that ArcelorMittal "did not disclose these significance theories in its prehearing brief," (VFOpB at 173) the testimony above and the corresponding schedule from Mr. Malackowski's report are cited in ArcelorMittal's pre-hearing brief in support of its argument that the tested parts alone "would require significant investments in plant and equipment and labor and capital." AMPreHB at 196–97. VinFast did not object to this portion of ArcelorMittal's pre-hearing brief, either with a motion in *limine*, a high-priority objection, or a motion to strike.

Acknowledging that Mr. Malackowski did in fact offer these opinions, VinFast argues he

[redacted]

"shifted his opinion"[36] regarding CX-0122C from his report to his deposition and purportedly "disparaged" CX-0122C at his deposition by referring to it as an "anecdotal exemplar." VFOpB at 175–77. Even if accurate, this would not be a basis to strike. To the extent VinFast perceived a meaningful inconsistency, it was free to cross examine Mr. Malackowski on that issue at the hearing. Mr. Malackowski simply pointed out that CX-0122C is incomplete because he lacked the necessary data to quantify the investment for certain parts, and that the rebuttal analysis performed by *VinFast's expert* (whom VinFast chose not to call at the hearing) was highly flawed. CX-0015C (Malackowski) at 88:6–96:23, 165:2–166:15. Mr. Malackowski explained, as ArcelorMittal does here and in its initial post-hearing brief, that because you "can't build half a line" or only hire "20 percent of production" employees to make even a "handful of parts," "the investment necessary to manufacture seven parts is well above [redacted]"; therefore, [redacted] was "understated because of the way it's presented," but "*supports the general conclusion*" of significance. *Id.* at 92:17–96:23.

Accordingly, there is no basis to strike Mr. Malackowski's timely disclosed opinion that the investments summed in CX-0122C are significant, and VinFast's motion should be denied.

B. [redacted]

VinFast does not offer any independent analysis for its [redacted] request to strike but instead argues only that "ArcelorMittal did not identify any deposition support for this new opinion because none exists." VFOpB at 177. Again, VinFast is incorrect.

First, as mentioned, Mr. Malackowski stated in his report that his "alternative analysis for

[36] In so stating, VinFast is acknowledging that Mr. Malackowski timely offered an "opinion" that CX-0122C is the "minimum necessary investment[]" to manufacture three Tested DI Direct Products (one [redacted], one [redacted], and a single [redacted]). *See* Gr. 7.1.

[redacted]

the domestic investments in the DI Direct Products" "tested by Dr. Fekete" were still significant. CX-0081C at 9–10 (citing §§ 10.2–10.7 of his report, and CX-0122C (Schedule 3.2.[0])); *id.* at 160. Again, this statement alone (which cites to the portion of his report quantifying [redacted] investments, including allocated to the tested parts) is sufficient to disclose his opinion regarding the significance of the investments allocated to the Tested DI Direct Products.

VinFast neglected to ask Mr. Malackowski at his deposition about the schedules to his report allocating [redacted] investments in the tested *direct* products (as set forth in, *e.g.*, CX-0229C, CX-0230C, CX-0233C, CX-0236C, CX-0247C, CX-0249C, CX-0262C), but as Mr. Malackowski explained with respect to CX-0122C (focused on Calvert), his tested part allocations in fact represent the broader question of "what investment do you need to make to get a part out the door…And the investment required for the first part is extraordinary relative to the average investment for a million parts, and that's what I'm trying to show here." CX-0015C (Malackowski) at 95:22–96:18.

Mr. Malackowski's opinions regarding the significance of these tested part allocations were timely disclosed, and VinFast's motion to strike should be denied.

VI. REMEDY AND BONDING

VinFast failed to present any evidence or testimony supporting its remedy positions.

A. Limited Exclusion Order

ArcelorMittal demonstrated a Section 337 violation, and VinFast stipulated to importing the Accused Products to the U.S. EDIS ID No. 836421 ¶ 5. Accordingly, an LEO is required. 19 U.S.C. § 1337(d)(1). VinFast does not dispute that if an LEO issues, it should prevent VinFast from engaging in unfair acts involving the Accused Products in the U.S., including but not limited to importation, sale for importation, selling after importation, and offering for sale. VFPreHB at 246; VFOpB at 178. VinFast argues only that the LEO should (1) "permit VinFast to continue

[redacted]

servicing, repairing, and replacing products that consumers in the U.S. have already purchased"; (2) include the "standard certification provision"; and (3) carve out particular products (*e.g.*, the VF 9) if those products are not found to infringe. VFOpB at 178. These points are not disputed; however, the service-and-repair exception applies *only* to VinFast's *contracts* with customers in effect prior to the LEO. *Certain Digit. Video Receivers & Related Hardware & Software Components*, Inv. No. 337-TA-1103, ID, 2019 WL 2953269, at *169 (June 4, 2019).[37]

B. Cease and Desist Order

VinFast agrees a CDO may issue when respondents "maintain commercially significant inventories…or have significant domestic operations that could undercut the remedy provided by an [LEO]." VFOpB at 178–79 (quoting *Certain Light-Based Physiological Measurement Devices*, Inv. No. 337-TA-1276, Comm'n Op. at 74 (Nov. 14, 2023)). VinFast does not dispute it maintains an inventory and performs "activities" in the U.S. "with respect to the Accused Products." *Id.*

VinFast instead imparts a market-share-like significance test into the CDO analysis that has no basis in Commission precedent. *Id.* at 178–80. Specifically, VinFast claims (without any legal or evidentiary support) that "when compared to the millions of automobiles sold in the U.S. per year," "VinFast's inventory or alleged domestic operations" would not "undercut" an LEO. *Id.* But the CDO analysis does not require ArcelorMittal to prove VinFast maintains a certain domestic market share; rather, the analysis focuses on whether ***VinFast's*** domestic operations (including continuing to sell the Accused Products) would undercut a LEO; they would. *Certain Table Saws Incorporating Active Injury Mitigation Tech.*, Inv. No. 337-TA-965, Comm'n Op., 2017 WL 1476193, at *3 (Feb. 1, 2017) ("[T]he Commission has issued numerous [CDOs] in

[37] VinFast also "reserves all rights to argue that the Commission should tailor, delay, or suspend remedial orders." VFOpB at 177. VinFast has provided no rationale for why that may be necessary, and ArcelorMittal reserves all rights to respond to or move to strike such arguments.

[redacted]

recent investigations in which a violation has occurred and the relief was requested and supported by the record."); *Certain Agric. Vehicles*, Inv. No. 337-TA-487, Comm'n Op., 2004 WL 2224033, at *7 (Sept. 24, 2004) ("[T]here is no lower limit on the number of articles a domestic respondent must have in inventory before that inventory can be found to be 'commercially significant.'"). As Mr. Malackowski testified, a CDO is warranted because VinFast is "continuing to scale its operation" in the U.S., which it identifies as a "critical market." Tr. (Malackowski) at 419:3–420:17. Sales of the VF 8 have been "increasing recently," "going up [redacted]," and VinFast's "number of dealers is growing." *Id.* These U.S. operations (and VinFast's inventory of over [redacted] vehicles) are "significant," and, if permitted to continue, will take sales away from ArcelorMittal, its licensees, and authorized manufacturers. *Id.*

VinFast claims "inventory, or the ability to replenish inventory, is needed to undercut an exclusion order," but does not dispute that it satisfies this criterion. VFOpB at 179 (citing *Certain Power Inverters & Converters*, Inv. No. 337-TA-1267, RD at 8 (Aug. 26, 2022)). Indeed, VinFast admits it maintains an inventory of the Accused Products in the U.S.; it has continued to import vehicles as it continues to sell them, indicating it can replenish its inventory. EDIS ID No. 844266; EDIS ID No. 836421 at ¶¶ 9–11, Appendix C; Tr. (Malackowski) at 420:2–13; RX-1260C; RX-1009C; RX-1010C. To the extent VinFast is suggesting its inventory is not significant because it encompasses inventory maintained by both VinFast and third-party dealerships (*see* EDIS ID No. 836421, Appendix C), its own cited case (*Certain Power Inverters*) confirms that "dealer inventory can be considered" in the CDO analysis, particularly where the respondent has "interactions" with those dealers. *Certain Power Inverters*, RD at 7. VinFast does not dispute it has significant interactions, including commercial contracts, with third-party dealerships. CX-0066; Tr. (Nguyen) at 734:5–7, 738:7–739:9; CX-016C (Nguyen) at 50:20–51:9; CX-0931.0086.

[redacted]

Finally, VinFast argues ArcelorMittal failed to identify the Respondent(s) for which a CDO should issue. VFOpB at 180. Notably, VinFast stipulated "Respondents will not challenge the contention that they maintain an inventory in the United States," without carving out any specific Respondent. EDIS ID No. 836421 at ¶ 11. VinFast further admits all Respondents are subsidiaries of VinFast Auto Ltd. CX-0016C (Nguyen) at 19:13–20:1. Nevertheless, to the extent the CDO must be tailored to certain Respondents, ArcelorMittal identifies VinFast Auto, LLC and VinFast USA Distribution, LLC. These entities have significant U.S. inventory or operations:

- **VinFast Auto, LLC** "runs the showrooms that sell the VinFast vehicles in the US" to "end consumers." CX-0016C (Nguyen) at 22:18–21, 30:6–31:5, 34:13–16, 47:6–12. VinFast Auto is also responsible for "marketing or advertising or promotion of VinFast vehicles in the United States." CX-0016C (Nguyen) at 34:17–20. VinFast stipulated that "VinFast Auto, LLC" "has offered for sale and/or sold at least one of each Subject Product to customers in the United States." EDIS ID No. 836421 at ¶ 9.

- **VinFast USA Distribution, LLC** "imports the vehicle[s] into the US," and "sells [them to] different independent dealers or directly sells to VinFast Auto, LLC," (which, as mentioned, sells the vehicles to "end consumers"). CX-0016C (Nguyen) at 15–16, 21:3–22:17, 30:6–31:5, 45:20–46:13; CX-0300C. VinFast stipulated "VinFast USA Distribution, LLC" "has offered for sale and/or sold at least one of each Subject Product to third-party dealers in the United States." EDIS ID No. 836421 ¶ 9.

Thus, a CDO (directed to at least the VinFast Respondents identified above in bold) is necessary to prevent VinFast from undercutting the relief provided by the LEO.

C. Bond

VinFast accuses ArcelorMittal of failing to provide a "price differential" analysis and "overreaching by seeking a bond in the tens of *thousands* of dollars per automobile." VFOpB at 180–81. But not only is such an analysis not required, in this Investigation, as Mr. Malackowski testified, a price differential analysis was not meaningful or possible. Tr. (Malackowski) at 419:18–23 ("I considered the usual metrics, [including] cost differential, but ultimately concluded based upon the record of this case that the most appropriate measure would be 100 percent of the value of the products that are accused."). Specifically, although both VinFast and ArcelorMittal

[redacted]

provided pricing information, VinFast (a car manufacturer) provided pricing for *vehicles*, while ArcelorMittal (a steel manufacturer) provided pricing for *precursor steel*. In similar situations, where a meaningful price differential analysis was impractical, the Commission has issued a 100% bond. *Certain Pick-Up Truck Folding Bed Cover Sys. (III)*, Inv. No. 337-TA-1353, Ord. No. 33, 2024 WL 2106595, at *66 (Apr. 23, 2024); *Certain Elec. Paper Towel Dispensing Devices*, Inv. No. 337-TA-718, Comm'n Op., 2012 WL 13210371, at *11 (Jan. 1, 2012).

VinFast argues the bond "should not exceed the royalty rate" from ArcelorMittal's licenses and should be at most "tens of U.S. dollars" (without offering a specific amount). VFOpB at 181. But the use of a royalty rate to determine the bond is appropriate only when based on a comparable license. *Certain Power Supply Controllers*, Inv. No. 337-TA-541, Comm'n Op., 2008 WL 2164194, at *10 (May 1, 2008) (a "license cannot be relied upon" to establish bond where the royalty rate is not alleged to be "comparable"); *Certain Digit. Photo Frames & Image Display Devices*, Inv. No. 337-TA-807, Comm'n Op., 2013 WL 12447248, Comm'n Op. at *11 (Mar. 27, 2013) (declining to rely on "settlement agreements" to establish the "bond amount" because they "do not provide clear guidance"). VinFast simply identifies ArcelorMittal's licenses with, *e.g.*, Calvert (its joint venture) and Cleveland-Cliffs (which was borne out of litigation) but offers no comparability analysis. VFOpB at 181 (citing CX-0031C; CX0034C). By contrast, Mr. Malackowski opined a "royalty" would not be an appropriate way to measure the bond. Tr. (Malackowski) at 419:18–23.

[redacted]

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Respectfully submitted,

/s/ Benjamin Hershkowitz

Benjamin Hershkowitz
Allen Kathir
Sung Bin Lee
GIBSON, DUNN & CRUTCHER LLP
200 Park Avenue
New York, NY 10166
(212) 351-4000
bhershkowitz@gibsondunn.com
akathir@gibsondunn.com
slee3@gibsondunn.com

Mark N. Reiter
Ashbey N. Morgan
Julia G. Tabat
Monica Lin
GIBSON, DUNN & CRUTCHER LLP
2001 Ross Avenue
Dallas, TX 75201
(214) 698-3100
mreiter@gibsondunn.com
anmorgan@gibsondunn.com
jtabat@gibsondunn.com
mlin2@gibsondunn.com

Brian Buroker
GIBSON, DUNN & CRUTCHER LLP
1700 M Street, N.W.
Washington, DC 20036
(202) 955-8500
bburoker@gibsondunn.com

Raymond A. LaMagna
GIBSON, DUNN & CRUTCHER LLP
333 South Grand Avenue
Los Angeles, CA 90071
(213) 229-7000
rlamagna@gibsondunn.com

Nathaniel R. Scharn
GIBSON, DUNN & CRUTCHER LLP
3161 Michelson Drive
Irvine, CA 92612-4412

[redacted]

(949) 451-3800
nscharn@gibsondunn.com

Evan T. Kratzer
GIBSON, DUNN & CRUTCHER LLP
310 University Avenue
Palo Alto, CA 94301
(650) 849-5300
ekratzer@gibsondunn.com

Counsel for Complainant

[redacted]

CERTIFICATE OF SERVICE

I, Michael Delaney, certify that on April 8, 2025, a copy of the foregoing document was served, pursuant to Commission regulations, on the following interested parties in the manner so indicated:

The Honorable Monica Bhattacharyya Administrative Law Judge U.S. International Trade Commission 500 E Street, S.W. Washington, DC 20436	*Via EDIS* *Bhattacharyya337@usitc.gov*
Counsel for Respondents VinFast Auto Ltd., VinFast Auto LLC, VinFast USA Distribution, LLC, Vingroup USA, LLC, and VinFast Trading and Production JSC: Michael J. McKeon Joseph V. Colaianni Linhong Zhang Sangki Park April Sunyoung Park Jack R. Wilson Daniel Y. Lee Irene Hwang FISH & RICHARDSON P.C. 1000 Maine Avenue, S.W., Suite 1000 Washington, D.C. 20024 Telephone: (202) 783-5070 Ashley Bolt Brian P. Boyd FISH & RICHARDSON P.C. 1180 Peachtree St SE, Suite 2100 Atlanta, GA 30309 Telephone: (404) 892-5005	*Via E-mail:* *ServiceVinFastArcelorMittalITC@fr.com*

DATE: April 8, 2025

/s/ *Michael Delaney*
Michael Delaney
GIBSON, DUNN & CRUTCHER LLP

CERTIFICATE OF SERVICE

I, Michael Delaney, certify that on April 22, 2025, copies of the foregoing document were served, pursuant to Commission regulations, on the following interested parties in the manner so indicated:

The Honorable Monica Bhattacharyya Administrative Law Judge U.S. International Trade Commission 500 E Street, S.W., Room 317 Washington, DC 20436	*Via EDIS* *Bhattacharyya337@usitc.gov*
Counsel for Respondents VinFast Auto Ltd., VinFast Auto, LLC, VinFast USA Distribution, LLC, Vingroup USA, LLC, and VinFast Trading and Production JSC: Michael J. McKeon Joseph V. Colaianni Linhong Zhang Sangki Park April Sunyoung Park Jack R. Wilson John Thuermer Daniel Y. Lee Irene Hwang FISH & RICHARDSON P.C. 1000 Maine Avenue, S.W., Suite 1000 Washington, D.C. 20024 Telephone: (202) 783-5070 Brian P. Boyd FISH & RICHARDSON P.C. 1180 Peachtree St. SE, Suite 2100 Atlanta, GA 30309 Telephone: (404) 892-5005	*Via E-mail:* *ServiceVinFastArcelorMittalITC@fr.com*

DATE: April 22, 2025

/s/ Michael Delaney
Michael Delaney