



Opening Statement

*Certain High-Strength Aluminum or Aluminum Alloy-Coated Steel,
and Automotive Products and Automobiles Containing Same*

Inv. No. 337-TA-1402

RDX-001.1

Who Is VinFast?



VinFast North Carolina Manufacturing Plant

Plant will have capacity to build 150,000 vehicles a year, create thousands of jobs

RALEIGH, N.C., March 29, 2022 (PRNewswire) -- VinFast and the government of North Carolina announced the signing of the memorandum of understanding (MOU) for the establishment of VinFast's first North American manufacturing plant. The company intends to invest up to \$2 billion in the project's phase 1, creating thousands of jobs.



Who Is ArcelorMittal?



Steel manufacturing in 15 countries	Customers in 140 countries	As of December 31, 2023 126,756 employees
Million tonnes iron ore mined in 2023 42	Million tonnes crude steel made in 2023 58.1	Steel shipments totalled in 2023 55.6 million tonnes
Research centres 14	Full-time researchers 1700	R&D programs 100+ in progress
Trademarked products 200+	Active patent families 831	New products and solutions launched in 2023 38



Asserted Patents

'602 Patent

Related U.S. Application Data

- (60) Continuation of application No. 15/606,770, filed on May 26, 2017, which is a continuation of application No. 13/621,015, filed on Sep. 15, 2012, now Pat. No. 9,708,683, which is a division of application No. 12/447,777, filed as application No. PCT/IB2006/004019 on Oct. 30, 2006, now Pat. No. 8,307,680.

JX-0002 ('602 Patent)

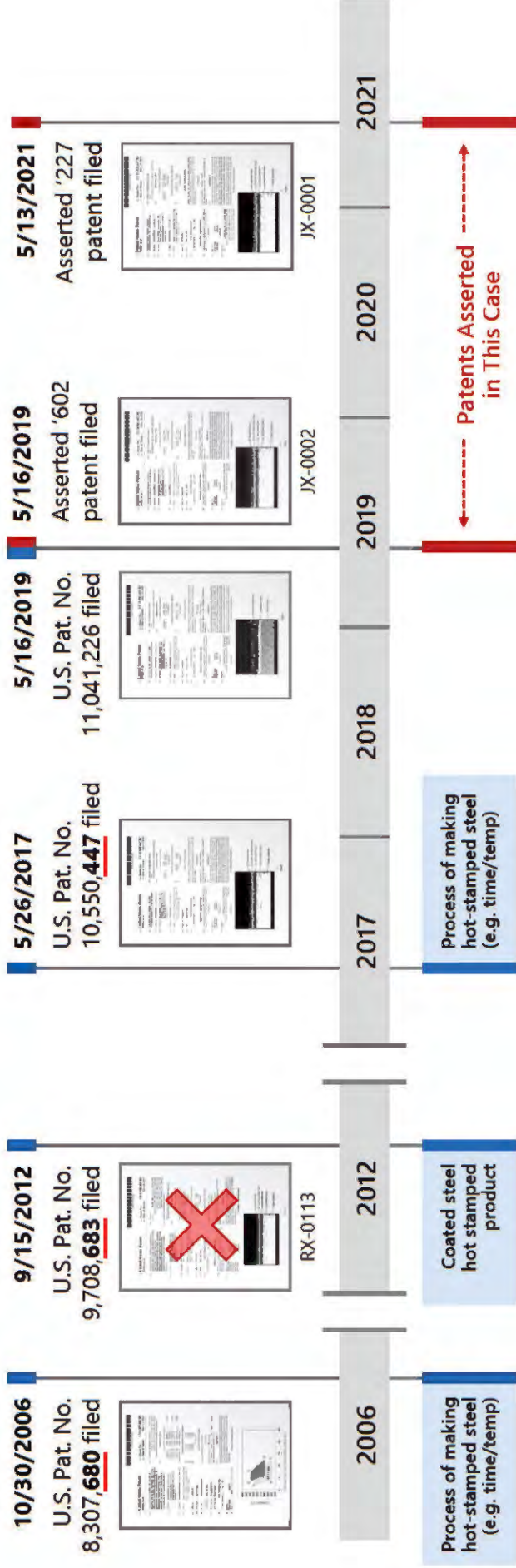
'227 Patent

Related U.S. Application Data

- (60) Continuation of application No. 16/413,825, filed on May 16, 2019, now Pat. No. 11,041,226, which is a continuation of application No. 15/606,770, filed on May 26, 2017, now Pat. No. 10,550,447, which is a continuation of application No. 13/621,015, filed on Sep. 15, 2012, now Pat. No. 9,708,683, which is a division of application No. 12/447,777, filed as application No. PCT/IB2006/004019 on Oct. 30, 2006, now Pat. No. 8,307,680.

JX-0001 ('227 Patent)

Asserted Patents



Asserted Patents

1. A precoated steel product comprising:

a strip of base steel having a first side and a second side; and

a coating on at least one of the first side of the strip of base steel and the second side of the strip of base steel, wherein the coating results from interdiffusion between the base steel, and an aluminum or aluminum alloy pre-coating, and wherein the coating includes, 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,

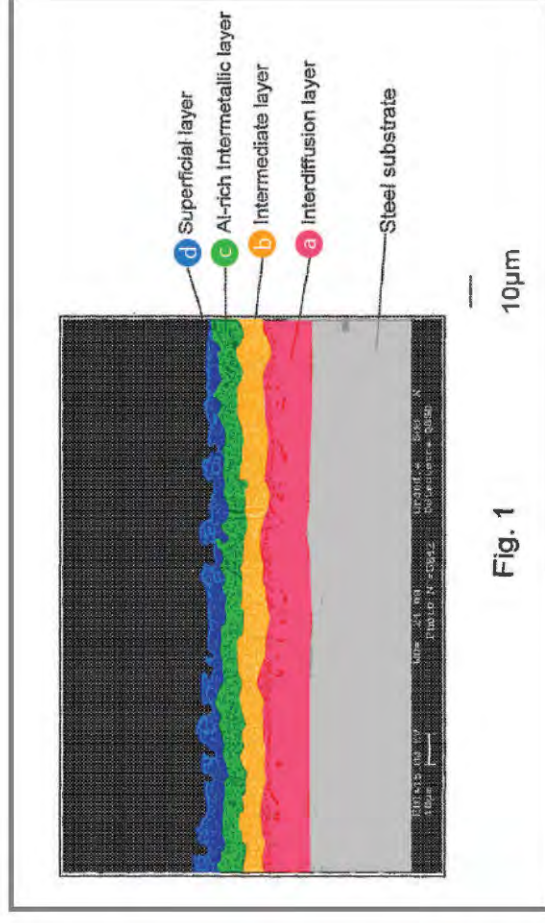
wherein the coating has a thickness greater than 30 micrometers.

JX-0002.0016-.0017 ('602 Patent) at Claim 1

Asserted Patents

FIG. 1 illustrates a preferred embodiment of an invention coated part, after heat treatment and stamping. The succession of layers of the coating on the steel substrate is: (a) interdiffusion layer; (b) superficial layer; (c) intermetallic layer; and (d) superficial layer. This arrangement is particularly favorable for the further welding of the part.

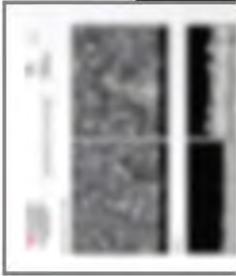
JX-0002.0011 ('602 Patent) at 3:51-56



JX-0002.0006 ('602 Patent) at Fig. 1 (annotated)

Asserted Patents

November 2005: Magna Approaches ArcelorMittal About Hot-Stamping Usibor 1500P

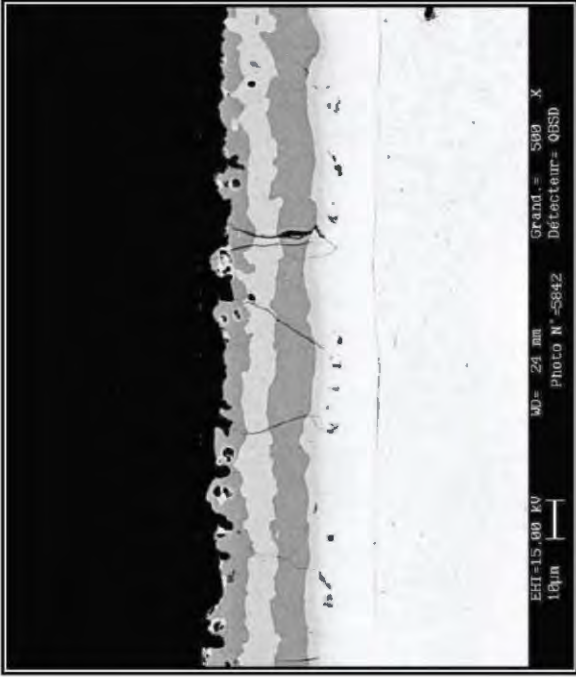


Date: 11/25/2005
* * *

Product: USIBOR
* * *

Alusi® coating

Distribution of results:
R. KEFFERSTEIN
M. BABBIT
A. MOULIN
A. CARMET
P. DRILLET
H. GUYON
T. STUREL



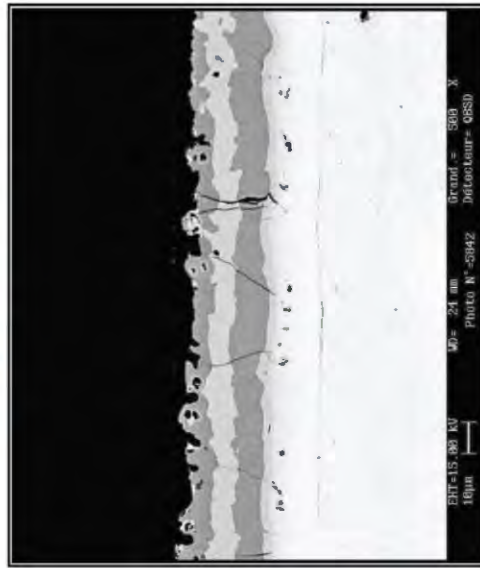
EHF-15 00 KV MO= 24 mm Grand = 500 X
10um Photo N°=5842 Detecteur= QESD

CX-0683C (AM-ITC-0102170 at 102174)

Asserted Patents

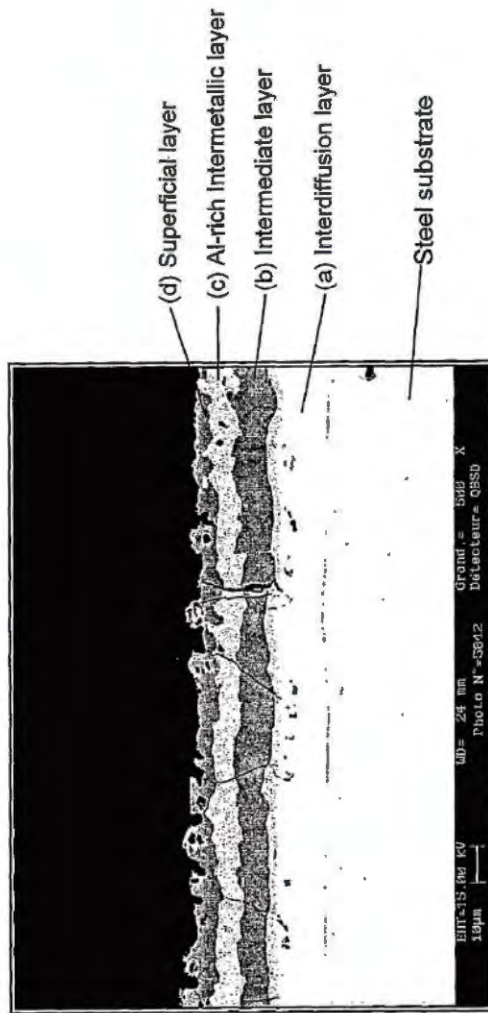
October 2006: ArcelorMittal Files Patent Applications on Magna's Work

Magna Product



CX-0683C.005

'602/'227 Patents, Figure 1



JX-0002 ('602 Patent)

Fig. 1

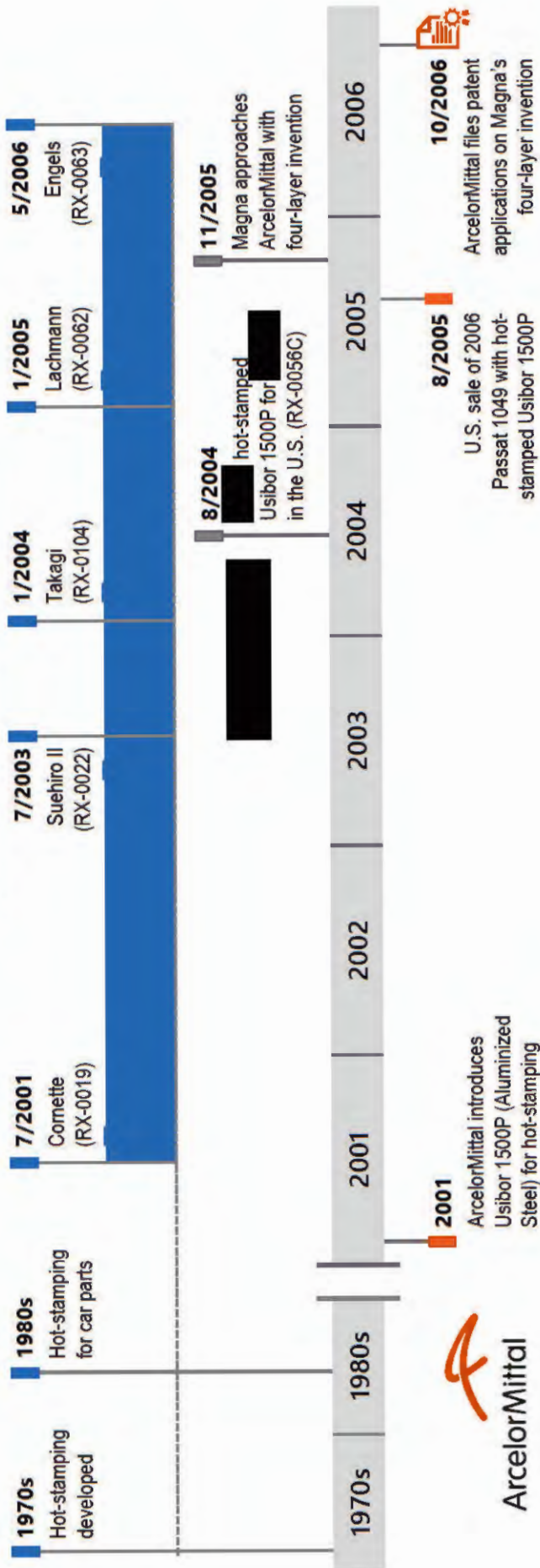
Invalidity

RDX-001.11

Invalidity

Prior Art Timeline

Publications about hot-stamping Usibor 1500P



Invalidity

Hot-Stamped Aluminized Steel Used for Manufacturing Car Parts Long Before the Asserted Patents

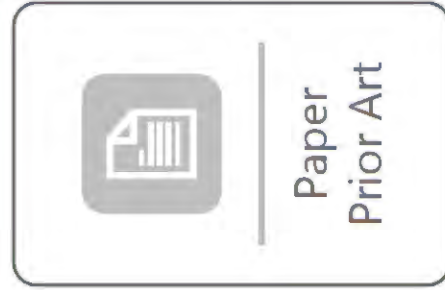
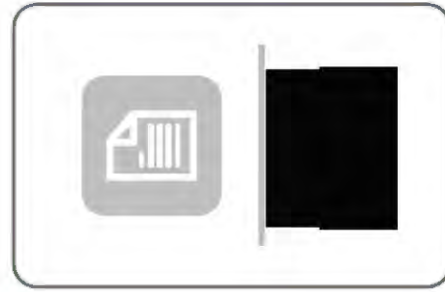


- A 1985:** 1st use of uncoated hot-stamped boron steel
- B 2001:** 1st use of pre-coated PHS on bumper-beam and A-pillar (Usibor 1500 Alusi)
- C 2005:** 1st use of pre-coated PHS (Usibor 1500 Alusi) on platform parts



CX-0563C (AM-ITC-0093096 at 99) (annotated)

The Claimed Inventions Was Already Well-Known



Invalidity

The 2006 Passat Invalidates All Claims

- The 2006 Passat (1049) was first offered for sale in the United States on August 18, 2005 by the Riverbank Volkswagen dealer located in Stamford, Connecticut.
- This is occurred more than one year before the 2006 priority application.

 Owner 1 Purchased: 2005		 Low mileage! This owner drove less than the industry average of 15,000 miles per year.		Personal Lease Vehicle 12,408 mi/yr	
Date	Mileage	Source	Comments		
Not Reported		NICB	Vehicle manufactured and shipped to original dealer		
08/16/2005		Riverbank Volkswagen Stamford, CT 203-327-2500	Vehicle offered for sale		

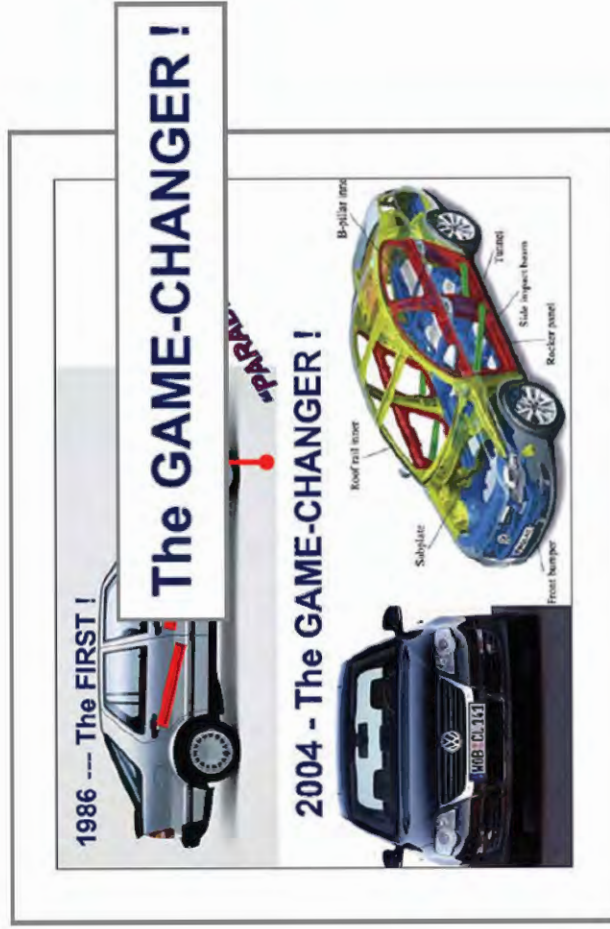
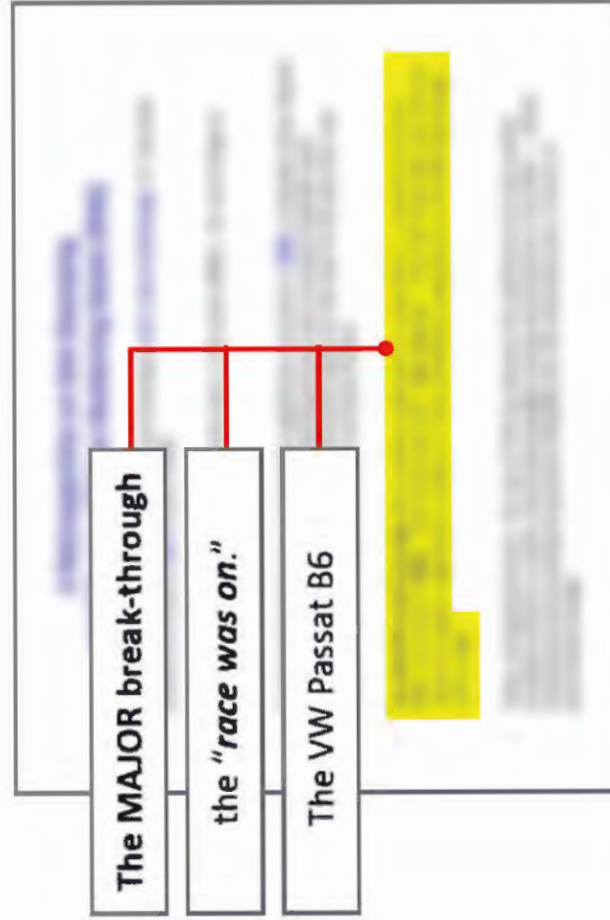
RX-0059.0002

2006 Passat



Invalidity

2004: ArcelorMittal Called the Passat's Hot-Stamping a "MAJOR Break-through"



CX-0565C (AM-ITC-0093243) at 251-252

RDX-001.16

Invalidity

1. A precoated steel product comprising:

* * *

- (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,



- d Superficial layer
- c Al-rich intermetallic layer
- b Intermediate layer
- a Interdiffusion layer

RX-0086 (2006 Passat)

JX-0002.0016 ('602 Patent at Claim 1 (excerpts))

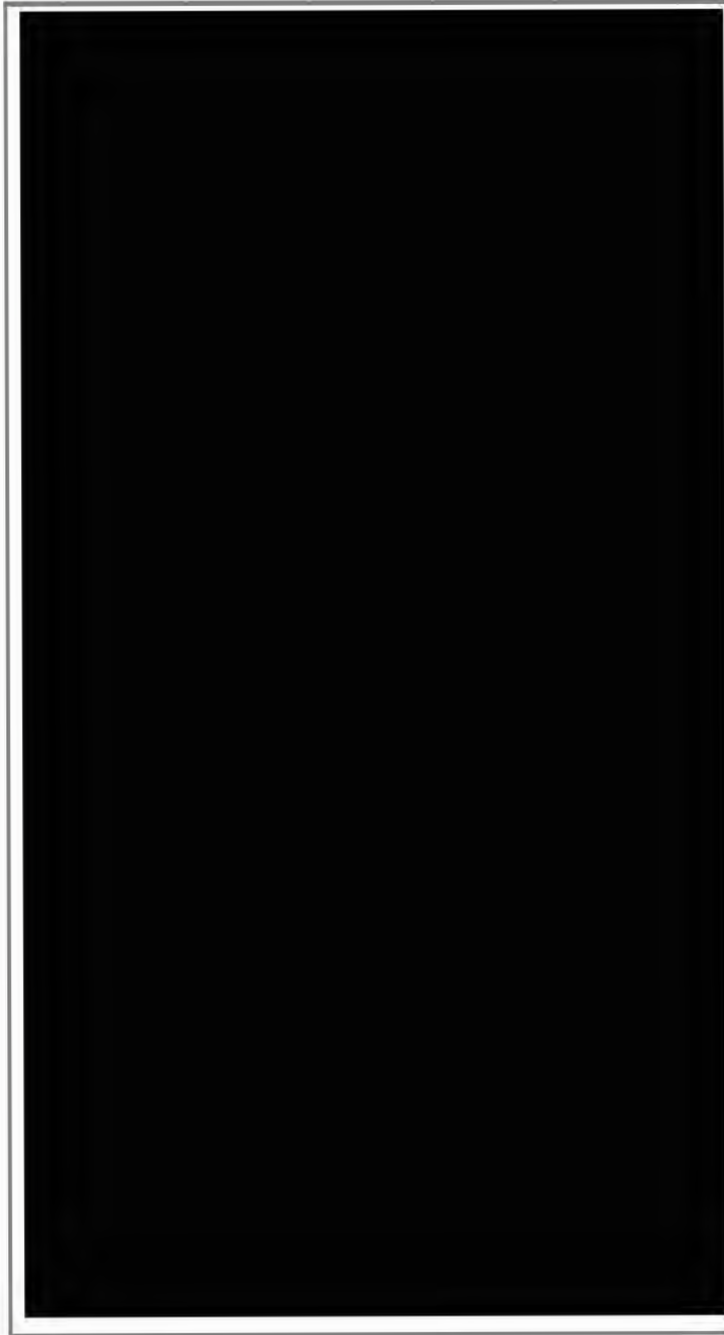
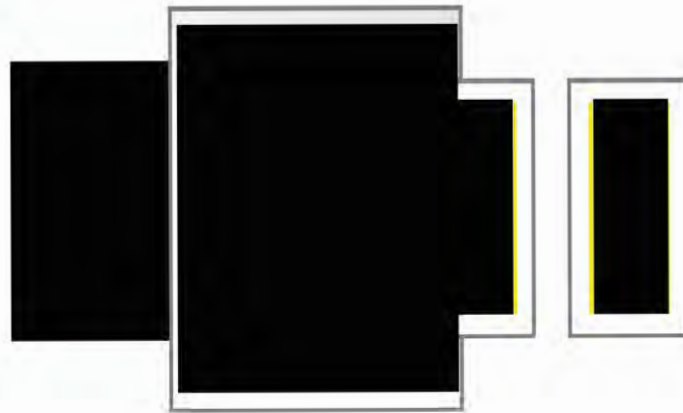
RDX-001.17

The Claimed Inventions Was Already Well-Known



Invalidity

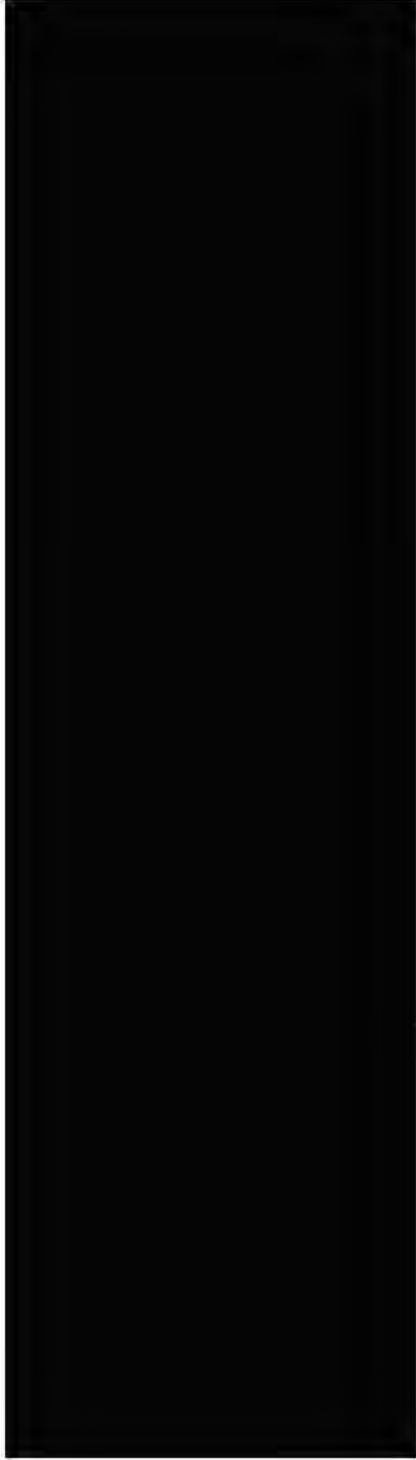
2004: [REDACTED] *Hot-Stamped Usibor 1500P for [REDACTED] in the U.S.*



RX-0056C

RDX-001.19

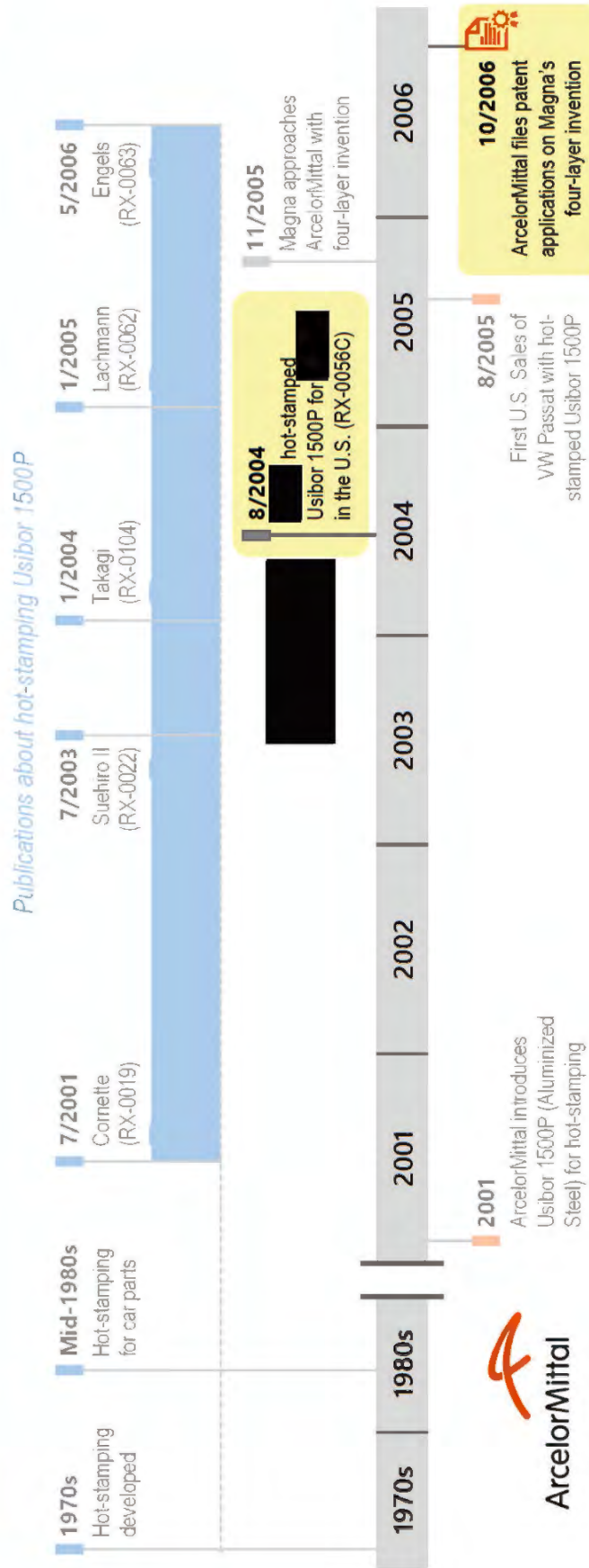
Invalidity



RDX-001.20

Invalidity

Prior Art Timeline



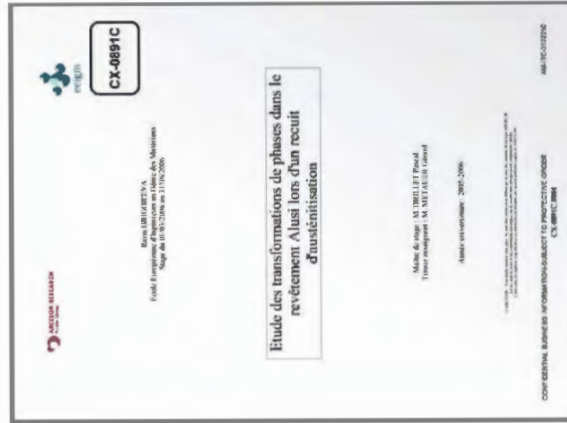
ArcelorMittal Claims Privilege for its Alleged Factual Support of Prior Conception

CX-0893CCX-0849CCX-0897C

Invalidity

ArcelorMittal Relies on a (Non-Inventor) Paper from Dr. Grigorieva Dated *After* Conception

A document authored by
Ms. Raisa Grigorieva, an
intern that started at
ArcelorMittal *after* the
alleged conception

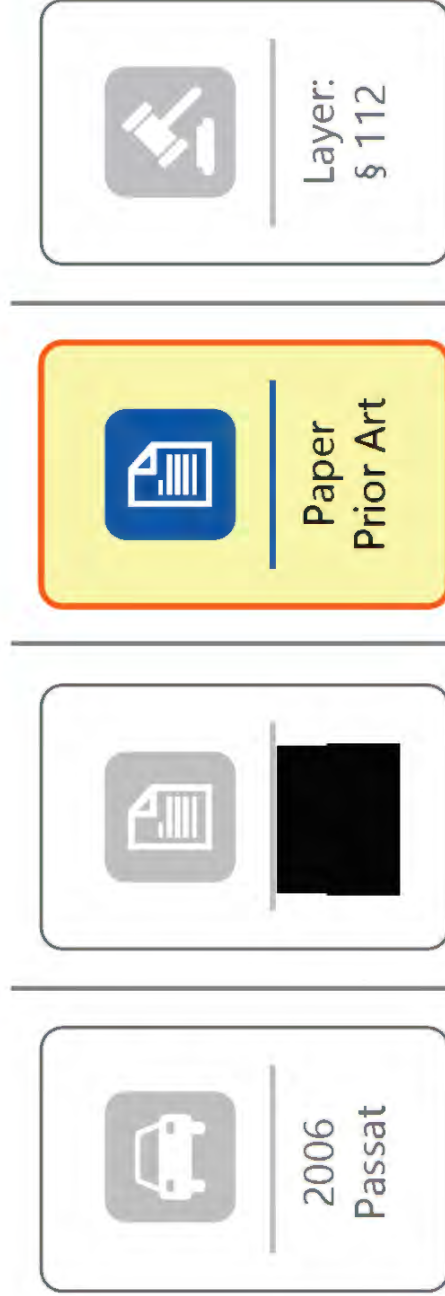


CX-0891C.0001
(Cover Page in French)



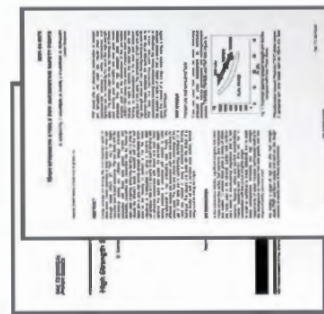
CX-0890C.0003
(English Version)

The Claimed Inventions Was Already Well-Known

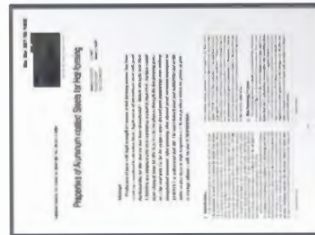


Invalidity

2001-2006: Publications About Hot-Stamping Usibor 1500



2001
Cornette
RX-0019



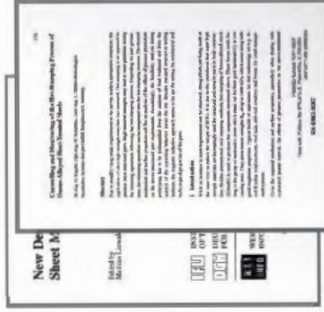
7/2003
Suehiro II
RX-0022



1/2004
Takagi
RX-0104



1/2005
Lachmann
RX-0062



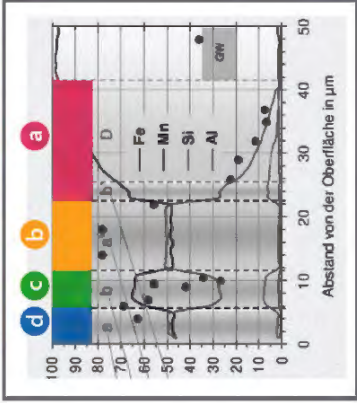
5/2006
Engels
RX-0063

Invalidity

Hole Number	PRECEDENCE	COLLECTOR	DATE	TOTAL WEIGHT		COUNT	COUNT PER GRAM	ESTIMATED ACTIVITY	ESTIMATED ACTIVITY PER GRAM	ESTIMATED ACTIVITY PER GRAM	ESTIMATED ACTIVITY PER GRAM	ESTIMATED ACTIVITY PER GRAM
				RAW	NET							
1	505	3	1950	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
2	505	2	1950	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
3	505	10	1950	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
4	505	5	1950	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	
5	505	8	1950	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	

Coastal View
Beach
Vegetation

a b c d e f



Invalidity

No Genuine Dispute that the Four-Layer Structure Is Prior Art



Dr. Pascal Drillet
Named Inventor

- Q. Is this an example of a hot stamper randomly creating a coating that has four layers?
- A. Yeah.
- Q. And this occurred before – this occurred in 2005. Correct?
- A. Yes, at the end of the '25, yeah – 2005, sorry.

RX-1282C (Drillet Tr.) at 107:1-8

Invalidity

The Process Parameters of the '602 & '227 Patents

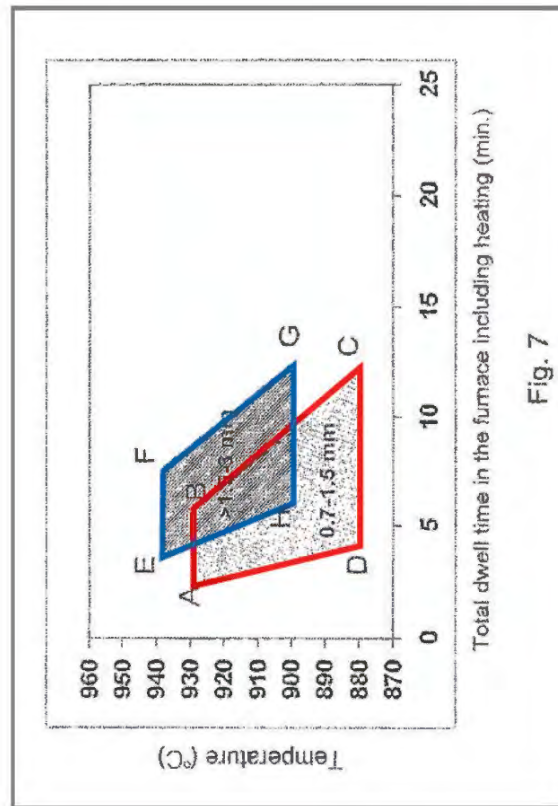


Fig. 7

JX-0002.0009 ('602 Patent) at Fig. 7

in its entirety 7.7° C./s). In this regard, all of the conditions specified within FIG. 7 are incorporated herein by reference thereto. Particularly preferred conditions are:

(for thicknesses of 0.7-1.5 mm)

930° C., from 3 minutes up to 6 minutes;

880° C., from 4 minutes 30 seconds up to 13 minutes (for thicknesses of 1.5 to 3 mm)

940° C., from 4 minutes up to 8 minutes;

900° C., from 6 minutes 30 seconds up to 13 minutes.

JX-0002.0013 ('602 Patent) at 7:29-35

Invalidity

The Allegedly Inventive Process Parameter Are Ubiquitous in the Prior Art

Cornette (2001)

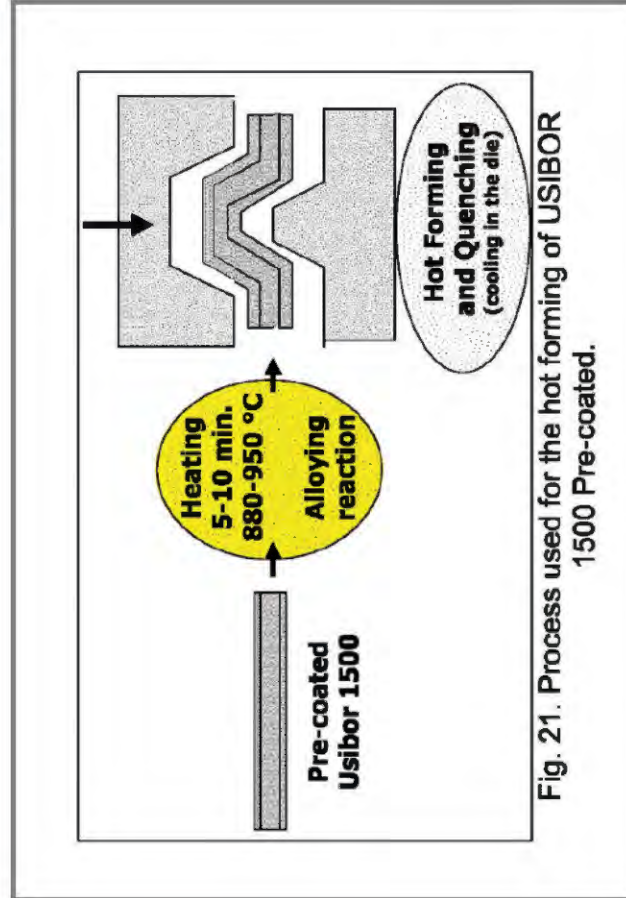


Fig. 21. Process used for the hot forming of USIBOR 1500 Pre-coated.

MECHANICAL CHARACTERISTICS

Before heat treatment, the typical mechanical properties (measured in the transverse direction) are the following:

ISO 20x80 type	YS (MPa)	UTS (MPa)	E (%)
pre-coated boron steel	400	600	21

Mechanical properties after hot forming process are not guaranteed by USINOR. Following typical values are obtained after austenitization at 900°C during 5 minutes and cooling in the die, for a material with a thickness of 1.5 mm:

ISO 20x80 type	YS (MPa)	UTS (MPa)	E (%)
pre-coated boron steel	1030	1510	5

The Al-Si coating does not significantly alter the heating process (heating speed temperature, dwell time) before forming nor the quenching speed in cooled tools.

RX-0019 (Cornette) at 9-10

RDX-001.30

The Claimed Inventions Was Already Well-Known



Noninfringement

RDX-001.32

Noninfringement

Accused Products

VinFast VF 8



VinFast VF 9



Noninfringement

ArcelorMittal's Analysis For Evaluating Claim Coverage is Fundamentally Flawed



James Fekete
ArcelorMittal Expert

Q. When you were doing the element-by-element analysis for the claimed layers, you compared the SEM micrographs taken from the parts, with the four-layer structure depicted in figure 1 of the asserted patents; right?

A. Correct.

RX-1287C (Fekete Tr.) at 59:12-17

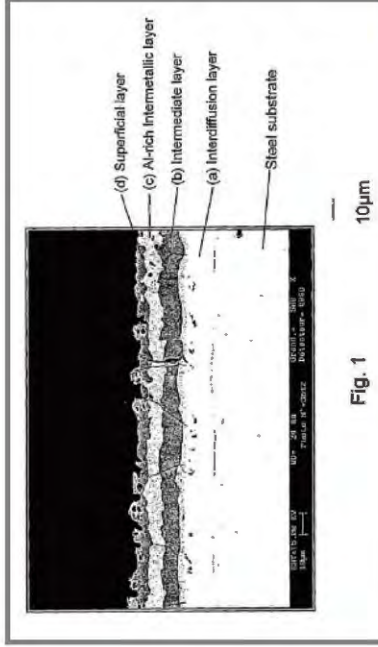


Fig. 1

FIG. 1 illustrates a preferred embodiment of an invention coated part, after heat treatment and stamping. The succession of layers of the coating on the steel substrate is: (a) interdiffusion layer; (b) intermediate layer; (c) intermetallic layer; and (d) superficial layer. This arrangement is particularly favorable for the further welding of the part.

JX-0002 ('602 Patent) at 3:51-56, Fig. 1

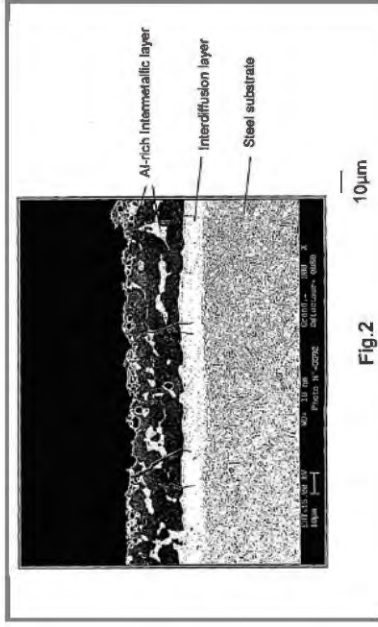


Fig. 2

FIG. 2 illustrates a coating of a steel substrate after heat treatment and stamping which does not correspond to the invention. This succession of layers (interdiffusion layer and intermetallic layer) yields inferior results in resistance spot welding.

JX-0002 ('602 Patent) at 3:57-61, Fig. 2

Noninfringement



"[I]nfringement is to be determined by comparing the asserted claim to the accused device, not by comparing the accused device to the figures of the asserted patent."

Catalina Lighting, Inc. v. Lamps Plus, Inc., 295 F.3d 1277, 1286 (Fed. Cir. 2002)

Noninfringement

Accused Products – VinFast VF 8



RX-1243C.0002

CX-0099C.0009 (Fekete Op. Rpt.), Ex. K

RDX-001.36

Noninfringement

ArcelorMittal Points to a Single 30 Micron SEM Image per VF 8 Part



CX-0099C.0002 (Fekete Op. Rpt.) Ex. K

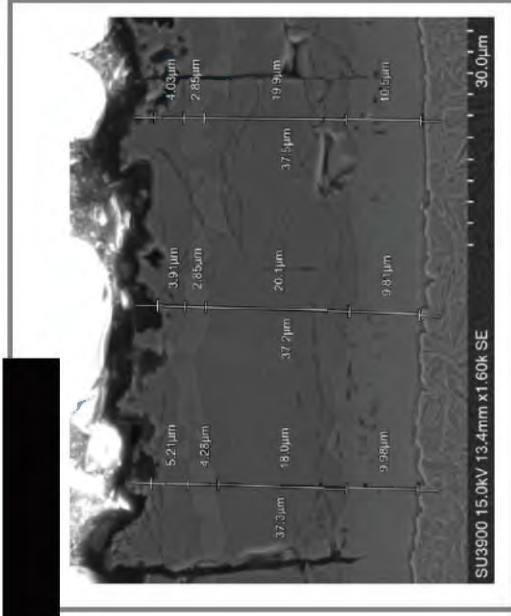
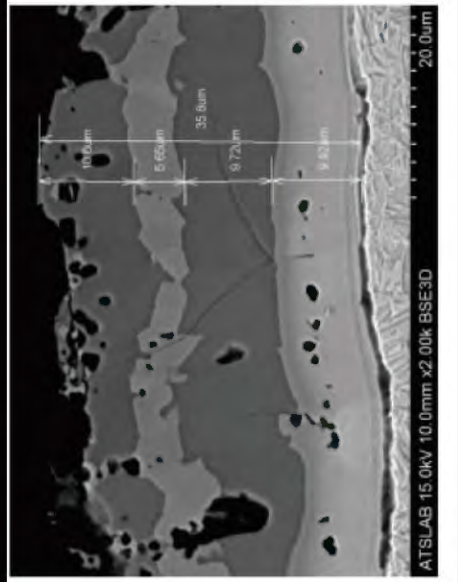
CX-0100C.0018 (Fekete Op. Rpt.) Ex. L

30 microns is half the width of a human hair



Noninfringement

ArcelorMittal Points to a Single 30 Micron SEM Image per VF 8 Part

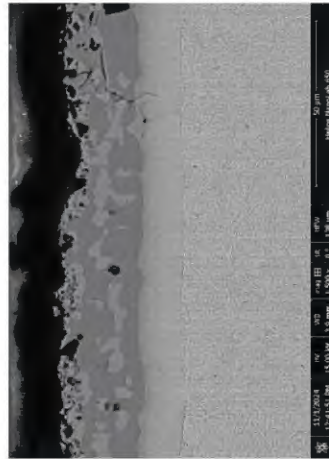


CX-0100C.0003, .0013, .0018 (Fekete Op. Rpt.), Ex. L

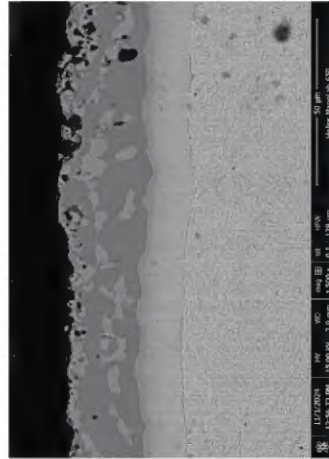
Noninfringement

VinFast Testing Confirms the Lack of Required Layers

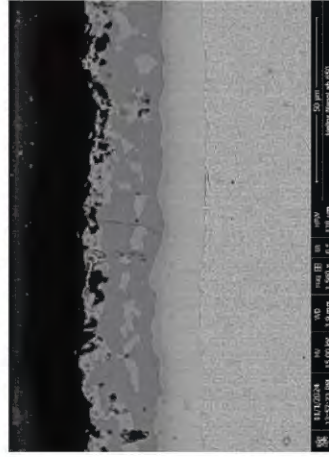
VinFast VF 8 B Pillar Parts



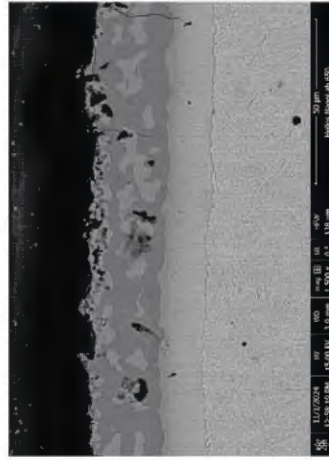
RX-0147C



RX-0148C



RX-0149C



RX-0150C

No Domestic Industry

RDX-001.40

No Domestic Industry

DI Products



DI Precursor Products

- Usibor 1500 AS150
- Usibor 2000 AS150
- Ductibor 450 AS150
- Ductibor 500 AS150
- Ductibor 1000 AS150
- Ultralume 500 60A/60A
- Ultralume 1500 60A/60A

DI Direct Products

Hundreds of products categorially defined as hot-stamped automotive parts used in automobile by Original Equipment Manufacturers (OEMs), such as:



No Domestic Industry

Manufacturers of DI Precursor Products

CALVERT



ArcelorMittal

(Joint Venture Between AM and Nippon)



NIPPON STEEL

CLIFFS



The Tier 1 Hot-Stampers



Gestamp



Multimatic



GNS NORTH AMERICA



CLIFFS



SIMWON AMERICA

Topre

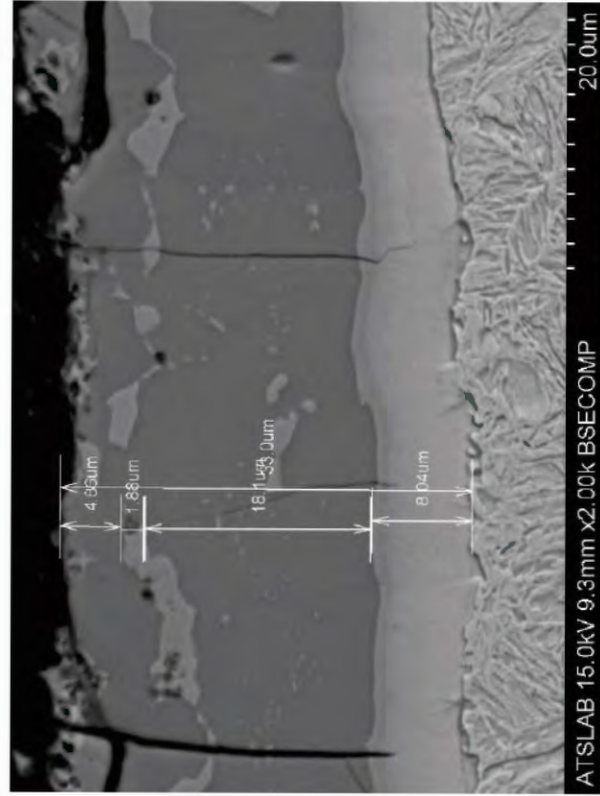
No Domestic Industry

The Tested DI Direct Products DO NOT Sustain AM's Domestic Industry Case

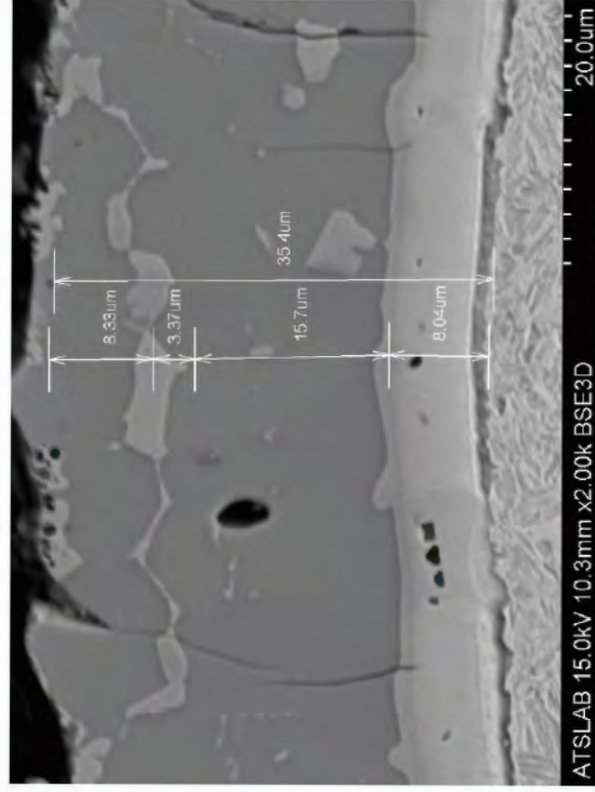
	Tested DI Direct Products	Alleged DI Precursor	SEM Exhibit Number	Issue
1		Usibor 1500 AS 150	CX-0860C	Not a licensed product
2		Unknown	CX-0861C	No corresponding DI Precursor Product
3		Unknown	CX-0862C	Admitted Nonpracticing Part
4		Usibor 1500 AS 150	CX-0863C	Admitted Nonpracticing Part
5		Usibor 1500 AS 150	CX-0864C	Admitted Nonpracticing Part
6		Usibor 1500 AS 80	CX-0865C	Admitted Nonpracticing Part
7		Unknown	CX-0866C	No corresponding DI Precursor Product
8		Unknown	CX-0869C	No corresponding DI Precursor Product
9		N/A	CX-0874C	No corresponding DI Precursor Product (Canada)
10-13		Unknown	CX-0875C – CX-0878C	No corresponding DI Precursor Product

No Domestic Industry

ArcelorMittal Admits Its Own Testing Shows No Practice of the Asserted Patents



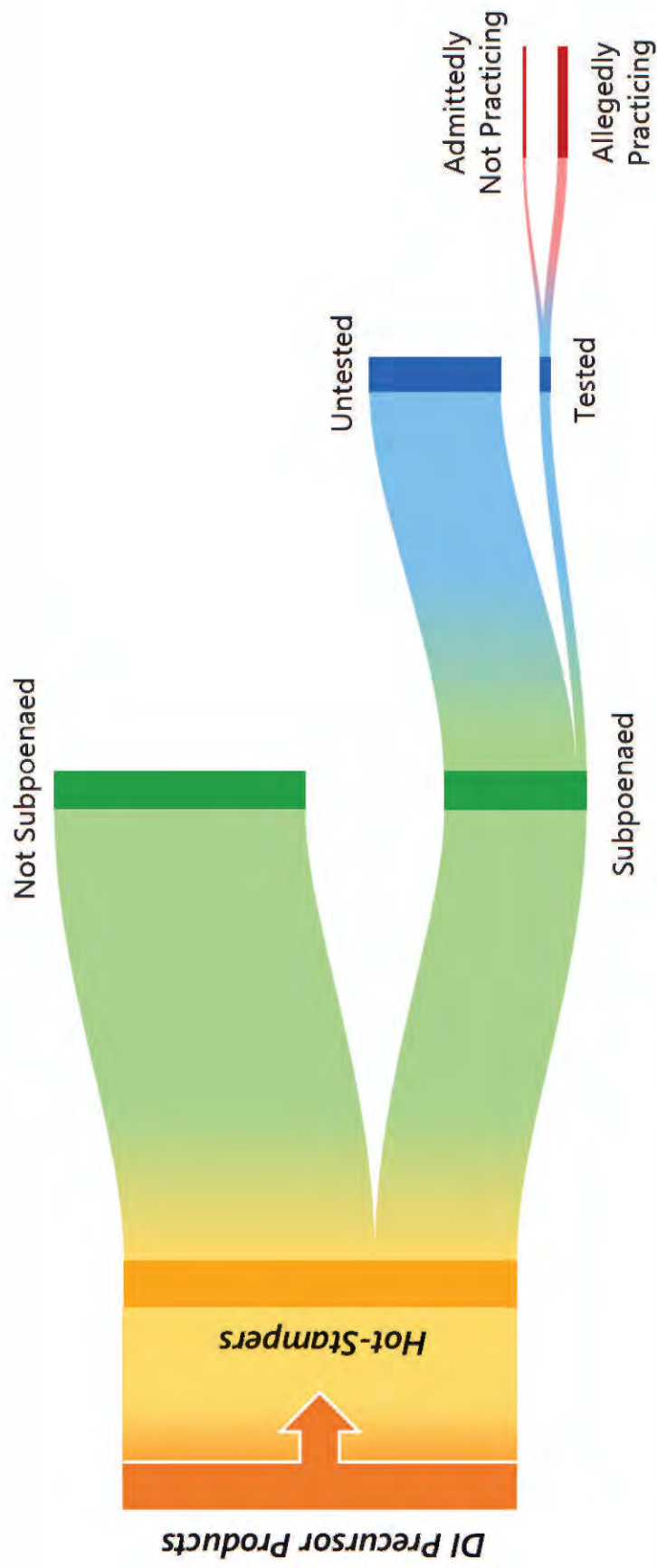
CX-0862C.0049



CX-0863C.0096

No Domestic Industry

The Tested Products Allegedly Practicing the Claim Are a Miniscule Fraction of All Products



VinFast Witnesses



**Ms. Thi Lan Anh
Nguyen**
VinFast CFO



Dr. Stuart Brown
Technical Expert



Dr. John Bradley
Material Testing Expert



Julia R. Rowe
Economic Expert