

UNITED STATES INTERNATIONAL TRADE COMMISSION

In the Matter of:	)	Investigation No.
CERTAIN HIGH-STRENGTH ALUMINUM OR	)	337-TA-1402
ALUMINUM-ALLOY COATED STEEL, AND	)	
AUTOMOTIVE PRODUCTS AND	)	
AUTOMOBILES CONTAINING SAME	)	

OPEN SESSIONS

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1 UNITED STATES INTERNATIONAL TRADE COMMISSION
2 Washington, D.C.
3 BEFORE THE HONORABLE MONICA BHATTACHARYYA
4 Administrative Law Judge

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6 In the Matter of:) Investigation No.
7 CERTAIN HIGH-STRENGTH ALUMINUM OR) 337-TA-1402
8 ALUMINUM-ALLOY COATED STEEL, AND)
9 AUTOMOTIVE PRODUCTS AND)
10 AUTOMOBILES CONTAINING SAME)
11 _____

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13 International Trade Commission
14 500 E Street, S.W.
15 Washington, D.C.

16
17 Monday, March 3, 2025

18
19 EVIDENTIARY HEARING - VOLUME 1

20
21 The Hearing commenced remotely, pursuant to the
22 notice of the Judge, at 9:31 a.m. Eastern.

23
24 Reported by: Marjorie Peters, FAPR, RMR, CRR

25

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1 P R O C E E D I N G S

2 JUDGE BHATTACHARYYA: Good morning, everyone.
3 Please be seated.

4 So we are here for the evidentiary hearing in
5 Certain High-Strength Aluminum or Aluminum Alloy-Coated
6 Steel, and Automotive Products and Automobiles Containing
7 Same.

8 Welcome, everyone. Would counsel please enter
9 their appearances.

10 MR. HERSHKOWITZ: Good morning, Your Honor.
11 Benjamin Hershkowitz from Gibson Dunn on behalf of
12 Complainant, ArcelorMittal.

13 We have Mark Reiter, Allen Kathir, Julia Tabat,
14 Mr. Sun Bin Lee, Nate Scharn, and Mr. Evan Kratzer.

15 In the back, last but definitely not least,
16 Monica Lin, and Mr. Ray LaMagna.

17 Hopefully, that did not count against my team
18 time.

19 MR. MCKEON: Good morning, Your Honor. Mike
20 McKeon with Fish & Richardson on behalf of VinFast
21 Respondents.

22 I need to make introductions. At counsel table,
23 I have Joseph Colaianni, Mr. Linhong Zhang, Ms. April Park,
24 Mr. Brian Boyd, Mr. Jack Wilson, Mr. Daniel Lee, and
25 Mr. Sangki Park.

1 We also have, Your Honor, our paralegal,
2 Mr. John Lund, in the back, and he's going to keep us
3 organized in the trial.

4 Our hot-seat guy, Mr. David Sayers.

5 Finally, Your Honor, the general counsel of
6 VinFast North America is here with us in this trial, that's
7 Mr. John Harris.

8 JUDGE BHATTACHARYYA: Good morning.

9 MR. MCKEON: With that, we're ready to proceed.

10 JUDGE BHATTACHARYYA: We're on the public
11 record. Please let me know if we need to move to the
12 confidential record.

13 MR. HERSHKOWITZ: Your Honor, Benjamin
14 Hirschowitz on behalf of the Complainant, ArcelorMittal.

15 I'm ready to proceed. May I approach and hand
16 you a hard copy?

17 JUDGE BHATTACHARYYA: Yes, you may.

18 MR. HERSHKOWITZ: May I proceed, Your Honor?

19 JUDGE BHATTACHARYYA: Yes, please.

20 OPENING STATEMENT BY COUNSEL FOR COMPLAINANT

21 MR. HERSHKOWITZ: Before we begin, I'd like to
22 talk about the parties here, specifically, ArcelorMittal.
23 It's one of the largest steel manufacturers in the world,
24 tracing its roots back well over 100 years.

25 Importantly here, we have developed a process

1 dealing with proprietary aluminum-coated alloy steel. They
2 have developed a large portfolio here around which two of
3 the patents here are part of that portfolio. They have
4 invested billions of dollars, including in the United
5 States, in connection with this technology, and they have
6 licensed widely.

7 We are here today because VinFast has chosen to
8 use unlicensed, instead of licensed, steel in the cars and
9 parts that it imports into this country.

10 So ArcelorMittal, as I mentioned, is a worldwide
11 company, has significant US operations. It has facilities
12 throughout the United States. We're going to really focus
13 on two of those facilities.

14 You will see down at the very bottom of the
15 screen, right at the Gulf of, I believe, America, we have
16 the Calvert facility. There is a large steel manufacturing
17 facility, and then due north, all the way at the border to
18 the north, you will see, between Illinois and Indiana,
19 there is the East Chicago research facility, and we'll be
20 talking about that today.

21 Between them, there are clearly thousands of
22 employees for ArcelorMittal in the United States.

23 If we go to the next slide, these are some of
24 the folks that you will be hearing from today from
25 ArcelorMittal.

1 Mr. Jean-Luc Thirion, recently promoted to CEO
2 of global research and development. He has spent his
3 entire 30-year career at ArcelorMittal. He will talk about
4 the scale of research and development in the United States
5 in the automotive industry involving the steel here.

6 You will also hear from Mr. -- or excuse me,
7 Dr. Pascal Drillet. He is one of the named inventors. He
8 will walk you through the development of the technology,
9 starting back in 2005, and explain this all to Your Honor.

10 We next have Mr. Bala Krishnan and Dr. Mark
11 Atkinson. I should mention each of them is actually
12 sitting on this side in the back of the room. We have
13 agreed with Respondents that everybody can sit in today for
14 the openings.

15 Mr. Krishnan will talk about the economic
16 activity out of that research and development lab, while --
17 or Dr. Atkinson will talk about the research and
18 development activities. He will talk about the
19 interactions of the entire ecosystem that takes place in
20 the United States in connection with this patented steel.

21 You will hear from Mr. Chris Richards. He is
22 the CEO of that Calvert, Alabama, facility where the steel
23 is made.

24 Finally, from Mr. Peter LeBlanc. He will talk
25 about the licensing of this very important technology.

1 You will also hear from some experts.

2 So this is Mr. James, Jim, Malackowski. He is
3 considered one of the top economic world-leading IP
4 strategists.

5 He was the head of the Licensing Executives
6 Society International, its president, which is the
7 organization -- the umbrella organization for licensing,
8 especially dealing with intellectual property.

9 He has been a member of the IAM IP Hall of Fame
10 that recognized him for his work. And just a few years
11 ago, he received the Q. Todd Dickinson Award, Mr. Dickinson
12 being a past commissioner of USPTO.

13 He has testified around the Court as well as
14 before this very Tribunal at the ITC ten times. You will
15 be hearing from him about economic DI, as well as remedy
16 bonding.

17 We now have two technical experts. The first of
18 whom you will hear from is Dr. Fekete.

19 Dr. Fekete has spent his entire career in
20 industry and academia dealing with metallurgy and the
21 relevant industry here.

22 He started out, in part, at National Steel
23 Company, which is obviously a manufacturer of steel. He
24 was at Novelis, which is aluminum, as we'll talk about
25 today. This case, this investigation, is about aluminum

1 alloy-coated steel.

2 He was then an accreditor for the American
3 Association for Laboratory Accreditation. The very labs
4 doing the tests, he was responsible for accrediting them.
5 He will explain why it's important to do testing at
6 accredited labs according to a detailed set of instructions
7 to them.

8 He was also in government at NIST, which is the
9 National Institute of Standards and Technology, where he
10 actually won an award for service, focused again on
11 metallurgy.

12 Then he spent a number of years in industry, in
13 the auto industry, at General Motors.

14 You will also hear from Dr. Dierk Raabe. It
15 would be an understatement to say that he is the world's
16 foremost authority on metallurgy and materials science.

17 He is the CEO of the world-renowned Institute
18 for Sustainable Materials, Max Planck. He has won almost
19 every award that can be granted in the field, including the
20 Leibniz Prize, which is an award. He was elected this year
21 to the US National Academy of Engineering, which is truly
22 prestigious, as typically, they only award membership to
23 people in the United States, but in light of his
24 exceptional contributions, they have made him a member this
25 year.

1 He will address validity issues, while
2 Dr. Fekete will address technical DI and infringement
3 issues.

4 You will not just hear from ArcelorMittal and
5 its witnesses and its experts, you will also hear from a
6 number of third parties. We served depositions on the
7 largest of what are called Tier 1s, also known as
8 hot-stampers. They're the ones that take this steel, this
9 aluminum alloy steel, and press it into the parts which you
10 see here in the courtroom, and which I managed to slice my
11 hand on today.

12 Those will include testimony from Cliffs, that
13 not only does hot-stamping via its Canada subsidiary, but
14 it's a licensee of the technology here, and as we'll
15 discuss, also manufactures the aluminum-coated alloy steel
16 here in the United States.

17 You will hear from the other hot-stampers,
18 Gestamp, there are dozens of others. These comprise the
19 seven largest that are hot-stamping the aluminum-coated
20 steel that is at issue in this investigation.

21 We'll also hear from and about VinFast.

22 VinFast is a fairly recent car manufacturer out
23 of Vietnam who is importing VF 8 and VF 9 electric vehicles
24 through the ports in California, and has opened showrooms
25 around the United States.

1 They have specifically targeted US as one of its
2 market. In light of its showrooms, it maintains inventory.
3 We have a stipulation to that effect about the inventory it
4 maintains here in the United States.

5 While we tested only the VF 8, as we will
6 discuss, the VF 9 was, we just learned, imported into the
7 United States in November of 2024, and it uses the same
8 steel from the same mill, hot-stamped the same way, and got
9 the same results, according to the same specifications.

10 So we'll talk about that.

11 So with that foundation, let's jump into the
12 substance of this. We'll talk about the technology at
13 issue; specifically, the proprietary coated steel that's
14 here, and how ArcelorMittal has secured a large portfolio,
15 again, of which two of those patents are at issue in this
16 investigation.

17 We will talk about the entire industry has taken
18 a license for POSCO, who is a steel manufacturer based out
19 of Korea, and they are using the unlicensed POSCO steel
20 here despite the fact that Hyundai, a larger steel
21 manufacturer in Korea, is a licensee of this technology.

22 ArcelorMittal has literally invested billions of
23 dollars worldwide, and there's been well over a billion
24 dollars collectively between ArcelorMittal and the Tier 1s
25 invested in the United States in connection with this

1 technology.

2 We tested dozens of parts, and we'll talk about
3 that, and that will demonstrate that there is, in fact, a
4 technical domestic industry here, too.

5 We also will talk about the testing we've done
6 on the VinFast parts.

7 We bought a car. We ripped it apart. There
8 were some parts we thought we could turn into a go-kart
9 with what's left, and unfortunately, we were told it was
10 not safe. Ms. Morgan is the one that was disappointed
11 about that because she wanted a go-kart from what remained
12 of the car. We tested the steel from VinFast as part of
13 the investigation, and they met the limitations of the
14 claims.

15 We will also go through that, not only does that
16 exist, but we'll talk about validity. You will find out
17 that the only thing that was already before the Patent
18 Office, the same entire arguments that the Patent Office
19 has already considered, and as a result, ArcelorMittal is
20 entitled to an exclusion order, 100 percent bond, and a
21 cease and desist order.

22 Let's jump in with respect to the technology.

23 What you're going to see here, Your Honor, is --
24 what we're talking about here is what's called
25 body-in-white. Now, I have no idea why it's called the

1 body-in-white. I consider it the skeleton of the car.

2 It's the cage that's protecting the occupants.

3 ArcelorMittal came up with a way of making that
4 even better. That is what the invention is here, and it
5 has a lot of benefits. It's there when you need it, if
6 you're in a crash, but it also contributes otherwise
7 because it's stronger, it's light, which improves fuel
8 economy, reduces CO2 emissions. That is the technology
9 that's at issue here.

10 What you're seeing is you will see the trade
11 names. Those are ArcelorMittal trade names for its
12 proprietary steel, Usibor and Ductibor. And you will see
13 there are two types of steel here, and you will hear today
14 about different parts of that skeleton. The A-Pillar that
15 runs between the windshield and the front doors. The
16 B-Pillar that runs between the front doors and the rear
17 doors.

18 Here's an example of a front door assembly,
19 which would then go onto that. So we'll talk about door
20 rings or door assemblies today.

21 What you will notice is that these are all
22 welded together. There another advantage of this is it
23 allowed for better welding of it. You will notice that
24 sometimes a part like a B-Pillar is made of two different
25 types of steel here, the Usibor and the Ductibor, that are

1 put together and welded together, and then what's called
2 "hot-stamped" by those companies, the same ones, the hot
3 stampers of the world, into a single part, which is then
4 separately welded to other parts. We'll talk about that.

5 Sometimes a part is even made from two different
6 types of steel.

7 So how do we get to that body-in-white, how do
8 we get to these parts.

9 Well, there are really two big steps to this
10 ecosystem.

11 Step number one is taking that raw steel, which
12 happens at Calvert, and turning it into what we call DI
13 precursor product; that is Usibor and Ductibor steel that
14 is aluminum-coated. It's known by Usibor and Ductibor
15 trade names for the Calvert production facility. It has a
16 AM/NS because it is a joint venture between ArcelorMittal
17 and Nippon Steel.

18 The licensee who manufactures in the United
19 States as Cleveland-Cliffs also known colloquially as
20 Cliffs. Their brand name for this is Ultralume. We'll
21 talk about that.

22 Then the giant steel rolls that are massive,
23 they get shipped to the Tier 1. The Tier 1 then turn those
24 into the parts by following the processing guidelines that
25 have been laid out and that were invented by Dr. Fekete,

1 who is here in the room, as well as his coinventors,
2 Mr. Kefferstein and Mr. Drillet.

3 If we go to the next slide.

4 As mentioned, here are the steel rolls that you
5 can see, and as you notice, there are different grades.
6 You can see Usibor 1500. I have heard the expression, you
7 know, "1,500 angels on the head of a pin." This is so
8 strong, it can hold 1,500 people on the head of a pin.
9 That is the steel that's strong that protects us. I'm told
10 that 1,500 is an understatement. That's the weight it can
11 hold, and that's what's known as a megapascals.

12 What you hear from Mr. Malackowski, who is also
13 here with us in the gallery today. He will explain the
14 investment that was made at Calvert in developing these
15 precursor products.

16 We'll then move on, and you will see we'll have
17 that raw steel that goes to the Calvert or Cliffs facility
18 and gets turned into that press-hardened steel, the very
19 strong steel that is used in cages.

20 The way it is, you get a steel roll, and you run
21 it through, kind of a funny name for it, a bath. It gates
22 bathed in aluminum, and it is processed to make sure it is
23 the coating that you want, and the coating that you need on
24 very tightly controlled parameters, and you end up with the
25 giant steel, aluminum-coated steel rolls.

1 You will hear from Mr. Richards, who is the CEO
2 of Calvert, about how that process works, and you will also
3 hear via deposition from Mr. James Chronister, who is the
4 Senior Director of Business Development at Cliffs, one of
5 the Teir 1s, those steel rolls get shipped out to the
6 hot-stampers.

7 As mentioned, we took depositions, we gathered
8 evidence, gathered parts from the seven largest that
9 actually process the Usibor steel. And you will hear from
10 Dr. -- from Ms. Morgan, Mr. Malackowski about the economic
11 investment there, and you will also hear from other
12 witnesses explaining how the process works, from including
13 those that were deposed, to end up with the parts that we
14 have here.

15 So how exactly does that hot-stamping work.

16 Well, Dr. Drillet, who is a named inventor, and
17 Dr. Fekete, who is one of our experts, will explain this in
18 more detail, but you have the giant steel rolls, the
19 aluminum-coated steel rolls, and there's a process known as
20 blanking, so you can cut out the rough shape of a part.
21 You heat it, you transfer it, and hot-stamp it in the
22 strong presses, and you end up with a final part.

23 I just made it sound a lot simpler than it is
24 because each step along the way you need to control the
25 processing parameters, the leading ring, the weld time, the

1 pressing ring, how you do it at each step along the way.
2 If you don't do it right, you end up with parts that do not
3 get the benefit of the invention here, that does not meet
4 the claims.

5 Sometimes that happens, but the trick is to make
6 sure you have a reputable and reliable hot-stamping
7 process.

8 We'll talk to Dr. Fekete to synthesize all of
9 the information that shows when they do it right, you end
10 up with proper hot-stamped parts.

11 Sometimes, you will find out that they didn't do
12 it right, and you know, we disclosed that data, too, when
13 somebody didn't do it right. We'll explain why when it
14 isn't done right how they ended up with a part that did not
15 meet the limitations of the claims, even though it was
16 intended to based on the guidance provided by the car
17 manufacturers and the guidance provided and coordinated by
18 ArcelorMittal.

19 So if we go now to the next slide, there's talks
20 about the patents for a moment. As I mentioned, you will
21 hear from Dr. Drillet. You will hear the deposition of
22 Mr. Kefferstein, all of them, and sadly, Dr. Spehner passed
23 a number of years ago.

24 They will explain not only the invention, but
25 the technology too will be explained by Dr. Drillet.

1 We go now to the patents. What is this about.

2 As you see directly from the title, it's coated
3 steel strips, stamped products, and methods for the same.
4 In other words, they lay all of this out in the
5 specification.

6 You will see it was originally filed October 30
7 of 2006, but we will tell, through documents, through
8 Dr. Drillet, that actually the inventor came up with this
9 in late 2005, and diligently worked to reduce it to
10 practice, and they will walk you through that.

11 So, we see -- this on the next slide -- here's
12 what happened. They have been working with the
13 hot-stampers to develop the technology further, and they
14 kept experimenting with the hot-stampers. Arcelor doesn't
15 do its own hot-stamping, they worked with them.

16 Finally, in working on controlling the process
17 parameters, they got worked on a part, and they said,
18 eureka, we now have the final piece of the puzzle. It
19 falls into place. Then immediately, they met with the
20 patent attorneys, and they started the application process.

21 Their diligence is shown by repeated discussions
22 with counsel, repeated additional work that took place in
23 the lab. They hired an intern who helped them document the
24 work they were doing. They continued with the prosecution
25 right up until the point where they filed that application

1 in October of 2006.

2 I remember the date because it's my wife's
3 birthday, October 30th. If I forgot it, I would be in a
4 lot of trouble. So that's one date that has stuck in my
5 mind.

6 So we have conception, diligence, reduction to
7 practice. You will hear from the named -- one of the named
8 inventors, Dr. Drillet, you will see the documentation.

9 So we turn now to what is the details of the
10 patent.

11 As mentioned, it's this precoated steel. You
12 have a steel base. You have an aluminum coating, an
13 aluminum pre-coating, you have the processes and coating,
14 stamped products, and one of my favorite terms in here,
15 land motor vehicles, which I have come up with a number of
16 different analogies for those of us that are old.

17 It reminded me of the James Bond vehicle that
18 would go into the water and became submersible, or when I
19 was talking to my colleagues who are a little younger, they
20 have no idea what I'm talking about, so I analogize it to
21 the duck boats. Obviously, these are for land motor
22 vehicles, and not for boats.

23 The patent then describes the benefits of it.
24 We see here -- just as an example, I have put up Claim 1.

25 So what is the invention? Well, the invention

1 starts with the special succession of layers running from
2 the base steel outward. There are four layers with the top
3 layer being a superficial surface layer. It is
4 particularly good, which you see Figure 1, which is
5 described as a preferred embodiment. It is particularly
6 favorable for welding and is one of the benefits that is
7 called out there. There are others.

8 Figure 2 is if you don't do it right, you end up
9 with inferior results that do not correspond to the
10 invention.

11 Dr. Drillet will take us through that.

12 We then turn to what do the asserted patents
13 discuss.

14 Well, in the specification we talk about not
15 only the benefits of the high weldability, the tensile
16 strength, the corrosion resistance, and how we get to
17 controlling the process parameters, the cooling rate, the
18 pre-coating thickness, the heating rate, the process
19 windows, and also numerous examples are given throughout
20 the specification.

21 So, that's how you end up with this
22 microstructure that has layers, that has metallurgy, the
23 composition, as Dr. Drillet will walk us through that.

24 So if we turn back, what are the limitations of
25 the claims.

1 Well, in general, as you see, you have layers;
2 you have the composition, the iron composition, you have
3 thicknesses in that last limitation of Claim 1, the
4 dependent claims that further define those compositions
5 more detailed, the relative weight, all while recognizing,
6 I think this is important in that last line of Claim 3, the
7 impurities in the process. We are operating in the real
8 world, and the trick is to be able to do this repeatably
9 and reliably.

10 And finally, we see the further definitions on
11 the different layers and thicknesses. This is some of what
12 you will hear today, Your Honor, and how this is met by
13 technical DI, and also met by the parts that were tested.

14 So let's turn now to domestic industry.

15 I don't think there's any reasonable dispute
16 that there's a significant domestic industry here. You
17 will hear from ArcelorMittal, the Tier 1 witnesses, the
18 experts. It is crystal clear almost none of their brief is
19 dedicated in an effort to try to refute this. They have
20 some argument, and we'll address those arguments through
21 the testimony of our witnesses and experts.

22 Talking about experts, we'll hear from two
23 experts, as mentioned, on DI, from Mr. Malackowski, who
24 will walk through who gathered and synthesized all of the
25 information on the economic side of it, and he will walk us

1 through that.

2 You also have Dr. Fekete, who made sure that he
3 came up with a testing protocol that was provided to
4 accredited labs to provide the results and make sure he got
5 those results, and also compared that with the OEM, the
6 auto companies, what they provided to those Tier 1.

7 He will say how those specifications point to
8 doing things in a way that's reliable and repeatable so
9 that you end up with the infringing parts, the domestic
10 industry parts. We'll talk about that's exactly what the
11 hot-stampers do the vast majority of the time. Not always.
12 Sometimes they make mistakes as one would expect in the
13 real world.

14 So what is that information? Well, as
15 mentioned, we have the Calvert facility down in Alabama,
16 and the Cliffs facilities in the midwest.

17 As mentioned, Mr. Chris Richards, and
18 Mr. Richards is President at AM/NS Calvert. You will hear
19 what goes on there and how that precursor steel is made.

20 Then we have more ecosystem here. This is
21 showing the Tier 1 as well as ArcelorMittal research
22 facilities that are in Indiana, and again, these are just
23 the largest of the Tier 1s that are processing the Usibor
24 steel that's here.

25 Now we get to the DI claims. There are 25 DI

1 claims. There are three independent claims, 1, 21, and 24,
2 in the '602 patent, one independent claim, Claim 1, in the
3 '227, and Dr. Fekete will walk us through how all of those
4 are met.

5 If I turn to the next slide.

6 Here we are back in the body in white to that
7 skeleton. What you can see here is the parts that were
8 tested are the very parts that Usibor and Ductibor were
9 intended for. The parts that were tested were the
10 skeleton, the body-in-white. We have the examples of the
11 parts, including body-in-white. This is what it looks like
12 over here on the left, Your Honor. We have that here, and
13 we will use that here to walk through the technology here.

14 Importantly, Dr. Fekete oversaw all of this
15 testing that took place.

16 We'll hear how The East Chicago research center
17 works with the auto companies, and works with the Tier 1 to
18 make sure they do this right so that you end up with parts
19 that meet the limitations of the claims.

20 So, you see here it's just an example of some of
21 the information that was gathered as part of the testing in
22 the upper ride right, you have what's known as an SEM,
23 which was one type of test that was done on all of the
24 parts, samples and coupons that were cut out and made from
25 the parts. The lime scan that's another type of testing

1 that was done, and the metallurgy testings that was done.
2 All of this was gathered together and synthesized. This
3 was done for the Tesla door ring, which again, is an
4 example that's to your left.

5 It's very, very important, I can't overstate
6 this, that we needed a robust testing protocol. Here's
7 where you are going to find a major difference between what
8 we did and what VinFast did.

9 We set up a robust testing protocol, in advance,
10 that was provided to the labs, and supervised. We received
11 no testing protocol from them. It's not clear that they
12 even followed one or gave one to the labs.

13 We want to make sure you're testing, all of your
14 testing is done only at accredited labs.

15 Again, we did it only at accredited labs. They
16 did some at accredited labs.

17 Then, you want to generate the sum-total and
18 gather all of that information together, literally hundreds
19 and hundreds of pages, that testing data alone fills all of
20 those binders.

21 Importantly, as mentioned, often the vast
22 majority of parts we tested infringed. When some didn't,
23 we gave that data, too, and Dr. Fekete will explain why on
24 a case-by-case basis what probably went wrong at Tier 1,
25 why that particular part, even though it should and was

1 meant to, didn't meet the process limitations. We didn't
2 hide anything. We gave all of that information to Your
3 Honor. We gave it all to VinFast.

4 I'm not sure we got the same courtesy in return.

5 We then know that the OEMs themselves,
6 Dr. Fekete looked at this, this is the recipe they are
7 given, the OEMs for GM, others, over to the Tier 1, and
8 say, you need to make sure you meet this with the parts
9 that you are making for us. They effectively outsource
10 stamping and the making of the parts.

11 They will say, this is the recipe that we want
12 you to follow.

13 How the baker meets that recipe, we work with
14 them, with the baker itself, the Tier 1 will decide how to
15 do this. They want you to ignore the recipe.

16 If we go now to what is the response of
17 technical DI. What I found is fascinating, ArcelorMittal's
18 expert, Dr. Fekete relies on a single SEM of the image of
19 certain parts to determine whether or not the claims are
20 met; however, reliance on a single SEM image is
21 insufficient. We could not agree more with the second
22 statement, reliance on a single SEM image is insufficient.
23 That's not what we did.

24 As a matter of fact, this is just one of the
25 number of binders with all of the test results, with many,

1 many, many images, hundreds upon hundreds of pages of
2 testing data on parts.

3 So we obviously agree with the second statement.
4 The first statement I was a little surprised they submitted
5 a corrected prehearing brief, but did not choose to correct
6 that statement.

7 Again, the next slide, turning to economic DI,
8 part of it, we will see that Mr. Malackowski synthesized
9 all of this information and will explain that Arcelor, the
10 licensees like Cliffs and the Tier 1s that get authorized
11 products are not mere importers.

12 There is a significant, material investment here
13 in the United States both on the precursor products as well
14 as the hot-stamping to end up with the parts that we'll
15 talk about in this investigation. He will talk about how
16 the East Chicago engineering research and development helps
17 coordinate much like a conductor, the entire symphony from
18 the steel to the parts to the cars, working at each step
19 along that ecosystem.

20 If we turn now just to give you a visual. This
21 is the Calvert facility, and both Mr. Malackowski, the
22 economic DI expert, as well as Dr. Fekete, the technical
23 and infringement expert, will talk about those issues for
24 ArcelorMittal. This is the facility to get the firsthand
25 view of how this works.

1 To give you an idea of how massive that facility
2 is, that yellow line is two-and-a-half miles long, which I
3 am informed by my colleague, Mr. Reiter, who likes playing
4 with Google maps, that's about the distance from the
5 Lincoln Memorial to the Capitol.

6 What you can see here is that the raw iron comes
7 in at the port. It is then processed. It is then turned
8 into giant, iron slabs. Those giant, iron rolls then, you
9 will see up at the top, below administrative office, you
10 see CAL number 2 and HDGL number 4. There are four lines
11 that will process the steel turning it into more advanced
12 steel. That line number 4 is the line that handles the
13 manufacture of the domestic industry steel that Usibor,
14 that Ductibor steel.

15 If we go to the next slide, that's just an image
16 of line 4, not of the whole facility. That's just line 4.
17 It is continuously running 24 hours a day, as one steel
18 slab gets finished, they weld a second steel slab on, so it
19 continues to work continuously around the clock. They do
20 processing on every step of the way to be able to get that
21 steel that we need at the end of the day that will then get
22 shipped out in coils again, re-coiled and shipped out.

23 It then gets shipped, as we said to the Tier 1,
24 and we secured documents, parts, testimony from the Tier 1
25 that they follow ArcelorMittal's specification or guidance,

1 they call it the OEM specification.

2 Mr. Krishnan will talk about his interaction
3 with those Tier 1, and that when done properly, we end up
4 with the tech DI parts that are here.

5 Again, as mentioned, the entire ecosystem from
6 the steel to the steel rolls to the DI parts, to being used
7 in cars, with the R&D center that is based in East Chicago
8 being the conductor to make sure that entire ecosystem
9 works together, and you will hear from Mr. Krishnan, from
10 Dr. Atkinson, Mr. Malackowski will explain the economics,
11 Dr. Fekete will will explain the technology, and the
12 tremendous investments that have gone on here.

13 So that East Chicago facility now seems a little
14 bit small in comparison to the Calvert facility, but it
15 does house 120 engineering, research and development
16 members of the organization. It's a sophisticated research
17 lab. Mr. Malackowski visited this, too, to understand how
18 this all works together. There are at least five buildings
19 on the 42 acres.

20 We then get, Your Honor, to not only has this
21 work been included in cars, but they have actually won
22 awards for this. That partnership between East Chicago and
23 others, Arcelor working with a Tier 1, working with an OEM
24 has won awards.

25 Because if you see that part, that door ring,

1 this is an example they came up with a way later on that
2 they were able to weld the parts together to hot-stamp an
3 entire door ring in one shot.

4 If you can see the gray on this is the coding,
5 but if you look carefully, there are sort of lines across
6 it. Those are where it was welded together in advance.
7 ArcelorMittal developed later technology that allowed that
8 to occur.

9 But you will notice along those lines, the
10 reason you see that is because the coating gets peeled
11 away. It could open up rest that goes there, but it's made
12 of, in this case, five separate parts. Sometimes it's four
13 separate parts depending on the particular car that it is
14 going into. So they won a very prestigious award called
15 the PACE Award due to that collaborative effort.

16 Going to the economic DI, Mr. Malackowski has
17 synthesized all of this. He will talk about the investment
18 at East Chicago of 14 million. The allocated investment,
19 quantitative and qualitative that took place at Calvert,
20 270 million. There's an additional 40 to 600 million
21 directly attributable here that has been allocated at
22 Cliffs, and then the hot-stampers, themselves, just the
23 under 40 percent of hot-stampers that are doing
24 ArcelorMittal -- using the ArcelorMittal steel, have
25 invested over a billion dollars. That was extrapolated out

1 of the two-and-a-half billion dollars.

2 I don't think there's any question that there's
3 a significant economic value-add in the United States based
4 on the technology that Dr. Drillet and his co-inventors
5 invented.

6 As a matter of fact, they have an expert they
7 put up, an economic expert, Ms. Rowe, she does not
8 challenge the 14 million. She does not challenge the 45 to
9 60 million. She does not challenge the billion. The only
10 thing she challenges is the \$270 million, and based on
11 assumptions that are frankly, incorrect.

12 So, Your Honor, that sums up the tech and
13 economic DI. I'd like to now touch on infringement, and
14 how ArcelorMittal has proven infringement.

15 We tested 34 separate parts. 34 parts. Every
16 single part we tested both from vehicles we purchased, as
17 well as the parts they gave us, came back after extensive
18 testing according to a protocol and showed infringement.

19 Most of the parts infringe every single one of
20 those claims. There were a few that infringed less, but
21 none infringed less than 22 claims.

22 So if we go to the next slide, these are the
23 automobiles, the parts that were tested, as mentioned, that
24 came out of the VF 8. And for the VF 9, they use the same
25 steel, the same steel manufacturer, the same hot-stampers

1 in Asia, according to the same specifications. And again,
2 Dr. Fekete will explain that they can get the same results
3 by following the same recipe.

4 Again, much like all of the other companies,
5 VinFast itself has a recipe that tells me to follow, and if
6 you look at that, it is pointing towards that there will be
7 infringement, and the processing of the recipe is followed
8 and done right of the parts here, and that information has
9 been reviewed as well.

10 Again, as mentioned, it is the same exact steel
11 with the same exact nomenclature that VinFast is using.
12 Again, here are the parts. There were 34 parts in total,
13 but it's 16 unique parts.

14 Again, you will see that part of that
15 body-in-white, you are seeing it right there. These are
16 the parts that were tested.

17 Again, in every single instance, infringement
18 was found.

19 If we turn now, much as Dr. Fekete does for the
20 tech DI parts, he puts together and synthesizes a process
21 at an accredited lab, gets back the test results, reviews
22 all of it, which is binders upon binders, which is SEM,
23 line scans, and testing that was done.

24 As mentioned, he has tested 34 parts, testing
25 protocol, accredited labs, getting back and analyzing all

1 of the materials which fills up, again, binder upon binder
2 upon binder of test results.

3 Well, it's probably not going to surprise you
4 that -- again, what is their attack? They spent very
5 little time trying to rebut infringement. They have the
6 same treatment again, believe it or not, this is from a
7 different part of the test, Dr. Fekete relies on a single
8 SEM image of certain parts. That is simply not true. He
9 relied on the totality of all of the data that was
10 collected in binder after binder after binder of material.

11 We agree that reliance on a single SEM image is
12 insufficient.

13 Again, a corrected brief with a significant
14 error in it.

15 We go now to the next slide. Let's talk about
16 validity.

17 What's interesting here is VinFast, in its
18 prehearing brief, spent 150 of its 250 pages talking about
19 validity. It has put virtually all of its eggs in this one
20 basket.

21 Well, what's interesting is I challenge them to
22 tell us where in that 150 pages they identified any new
23 prior art. They didn't. It was all before the Patent
24 Office previously.

25 Not only that, but they conveniently do not even

1 mention the burden, the clear and convincing burden that
2 they have to prove invalidity, and they have failed at
3 that. They don't even mention it, as if by not mentioning
4 it, it will somehow go away.

5 So what do we have here? Dr. Raabe will address
6 validity issues. The asserted references information about
7 them was before the Patent Office. VinFast has failed to
8 prove that most of these references are even prior art. No
9 proof of public availability. No -- several postdate the
10 invention. As Dr. Raabe will explain, they actually fail
11 to invalidate, alone or in combination, and furthermore,
12 VinFast chooses to ignore the secondary considerations,
13 arguing simply that there is no nexus.

14 We turn now to the Volkswagen 2006 Passat. It
15 is not prior art.

16 The thin reed which they hang their case on is
17 the Volkswagen, that it was a publicly-available part back
18 from prior to the invention date, is a Carfax report. The
19 Carfax report on its face says other information about this
20 vehicle, including problems, may not have been reported.
21 That's why many courts simply reject it outright as
22 hearsay. "Not all accidents, issues are reported to
23 Carfax." They say it twice. They say it again, we are
24 disclaiming any liability because we know that that our
25 reports are very often wrong.

1 As a matter of fact, there's no other thread
2 that they are trying to hang. Why? They took no discovery
3 of Volkswagen. They took no discovery of the first owner.
4 They took no discovery of the second owner. None. They
5 took no discovery of Carfax. All they have is just one
6 hearsay document. Quintessential hearsay that their whole
7 argument on Volkswagen is hanging upon, and that is simply
8 not enough.

9 As mentioned, not only are they relying on that
10 Carfax, but the Volkswagen information about that 2006
11 Volkswagen was before the Patent Office, not in one
12 reference, but in four references.

13 They're saying four reference, but there are
14 five things highlighted. Apparently, the first one got
15 noted twice. So that Self-Study Program 339 was noted
16 twice based on the patent. The examiner, nobody drove a
17 Volkswagen Passat into the Patent Office, but they had
18 extensive information about the Passat before them while
19 considering the claims.

20 We see here the self-study program. This was a
21 76-page document, a comprehensive overview of the car body
22 structure of the Volkswagen Passat. There was a Wikipedia
23 article talking about the Volkswagen. It was in French. A
24 machine translation was also provided, 16 pages.

25 We then have an analysis by Tata Steel, one of

1 the major steel companies out of Mumbai, India. They
2 talked about an analysis on an A pillar out of the Passat.
3 They talked about a process of hot-coated steel. And then
4 we have a 26-page TNO report you that have the results of
5 testing in connection with the Tata Steel report, and all
6 of this was before the examiner, and Dr. Fekete will
7 discuss it.

8 We then move to the references for art. What do
9 we have here? They rely on Engels. Your Honor's Order
10 Number 1, VinFast has no evidence of public availability.
11 Moreover, Engels postdates the conception and invention
12 today, and Dr. Raabe will further explain why Engels is
13 insufficient along with the combination.

14 We then get to Cornette. As we see on the
15 right, Cornette was also at the Patent Office. It was
16 already considered. VinFast's public availability relies
17 on the hearsay declaration of 2019. They did not bring
18 that. Unsubstantiated, no chance for cross, it's
19 unreliable. Regardless, Dr. Raabe will explain why
20 Cornette alone or in combination will not infringe.

21 Let's move on to Lachmann.

22 Again, this is allegedly a publication.
23 Regardless, it was considered, and they're relying on a
24 hearsay declaration from ten years ago about what someone
25 supposedly saw at a lecture ten years earlier.

1 There is a ten-year gap before they even
2 submitted that hearsay declaration. Regardless, Dr. Raabe
3 will explain why Lachmann is not VBL.

4 We now have Takagi. This is patented, so I will
5 not be talking about how there's no information on
6 publication.

7 Regardless, Dr. Raabe will explain that Takagi
8 is not valid, no motivation to combine.

9 We move on to the 103 references. These do not
10 validate in full. Here is Suehiro, we call it. It was
11 before the Patent Office. It's an article by Nippon Steel.
12 Nippon Steel, despite having the article, despite knowing
13 the information, is a licensee of the technology here, and
14 patents here, is an owner of that facility down in Calvert,
15 Alabama. There's not even a hearsay declaration here that
16 they are relying on. They have no information that this is
17 their publication. They're probably going to point to the
18 date that says 2003. That is facially insufficient.

19 We then go to a GM publication.

20 Again, Your Honor's Order 31, no evidence of
21 public availability. All right. As indicated, it was
22 before the Patent Office.

23 They next point to Laurent. Well, Laurent --
24 not only is Laurent there, four other publications by
25 Laurent are there. The reason for that, Laurent is

1 incorporated by reference in the patents. This is an
2 earlier patent by ArcelorMittal, and it is actually a
3 patent that was on that base steel with the coating by
4 itself.

5 So it's actually a patent that involves aspects
6 of the Usibor steel, and it was incorporated by reference,
7 and it is, again, you see, not only provided there four
8 more times in articles and information about from Laurent.

9 If we go now to the next slide, you will hear
10 about the Vaissiere. Again, before the Patent Office.
11 Again, Your Honor's Order 31, they have absolutely no
12 evidence that this reference was public. And again,
13 Dr. Raabe will explain, much like he will do with all of
14 the prior references, that there's no basis to use this
15 reference.

16 So where does that leave us? Where that leaves
17 us is their primary reference is information along the
18 bottom, every single one being considered by the Patent
19 Office, and most of them either do not qualify either
20 because they are too late and/or they have absolutely no
21 evidence of the public availability of that article such
22 that it could serve as prior art.

23 Same with the secondary references they're
24 relying on, number two, so they're left with Takagi and
25 Laurent.

1 They also rely on three additional references
2 that they say suggest show motivation to combine.

3 Well, as we discussed, GMW is not publicly
4 available, and FR Laurent is just another Laurent
5 publication that they point to. And again, as we talked
6 about, five different Laurent publications, including a
7 patent which was incorporated by reference, were already
8 considered, and Dr. Raabe will explain how none of this
9 shows a motivation to combine.

10 If we turn now to secondary considerations,
11 again, as mentioned, there's extensive licensing since this
12 invention has come up where the patents are included in the
13 licensing.

14 Calvert represents almost ten of the worldwide
15 aluminized steel that's made right here in the United
16 States.

17 The DI precursor products have increased, the DI
18 direct products have increased.

19 What you see on the right is both a historical
20 and forecast when it was done, and the incredible ramp-up
21 of Al-Si, which is aluminum silicon, that's what we are
22 talking about, the product, it has increased incredibly,
23 not exactly per this line, but an incredible increase in
24 it. Again, this has received improvement in weldability,
25 corrosion resistance, patentability, safety breakthroughs.

1 It has won an award here as there were unexpected results
2 as part of this.

3 You will hear from Mr. Malackowski synthesize
4 all of this, and you will hear witnesses talking about the
5 PACE Award and other aspects of that.

6 VinFast put forth two more arguments. They
7 raise a 112 argument. I'm not sure they're going to pursue
8 it. Their argument is that "layer" is somehow indefinite.
9 "Layer" is explained throughout the patent. It was a term
10 that was well used and well known in the industry.

11 As a matter of fact, the very entity that they
12 buy their steel from, POSCO, submitted a later patent, and
13 that patent -- well, what do you see. It's used both in
14 the specification over 100 times in the claims, "layer," in
15 a singular manner to being used in the patents are at issue
16 here.

17 We may also hear from them about a 101 argument,
18 I'm not going to address that here, to the extent that they
19 raise it, we will address it in the post-hearing briefing.
20 But again, Dr. Raabe will walk through any of those
21 arguments, and again, consistent with real-world industry,
22 nothing is perfect. There are going to be rough surfaces.
23 As you saw earlier, there are going to be impurities.
24 Layer is well understood in the art.

25 With that, Your Honor, I will touch briefly on

1 the exclusion order.

2 What we have, Your Honor, here is that
3 Mr. Malackowski will explain that we are entitled -- if we
4 are entitled, we have proven, and I think we have proven,
5 and we are entitled to an exclusion order with 100 percent
6 bond because VinFast makes cars, not parts, not steel, and
7 did not provide pricing information with respect to that.
8 This is a key market of theirs, and therefore, a cease and
9 desist order is also important. Ms. Rowe, their economic
10 expert, doesn't address these issues at all.

11 In conclusion, as my hour runs thin, technical
12 and economic domestic industry exists, and we will walk
13 through that methodically. VinFast accused products VF 8,
14 VF 9, infringe, and we will walk through that methodically.
15 The asserted patents are valid. They will not be able to
16 carry their very high burden. With respect to validity
17 issues, an exclusion and cease and desist order is
18 appropriate, Your Honor.

19 Thank you.

20 JUDGE BHATTACHARYYA: Thank you very much.

21 (Off the record.)

22 OPENING STATEMENT BY COUNSEL FOR RESPONDENTS

23 MR. MCKEON: All right. Good morning, Your
24 Honor. It's a privilege to be before you once again.

25 We just heard a lot. I'm going to try to

1 respond to most of that in my short time this morning. But
2 first I want to provide some observations about this case.

3 You know the complete mismatch between the
4 parties.

5 Within the one hand, you have ArcelorMittal,
6 which is -- by the way, I am going to refer to it as AM
7 this morning and probably throughout this trial to keep it
8 simple, AM is a multinational steel manufacturing
9 corporation headquartered in Luxembourg, and it is, of
10 course, in the steel business, not in the car business.

11 In other words, you have VinFast, which is a
12 relatively new car company based in Vietnam, and some of
13 the relevant parts in the car is the steel that doesn't get
14 sourced from AM.

15 Needless to say, VinFast is in the car business,
16 not in the steel business. VinFast does not manufacture
17 these precursor steel products. VinFast doesn't hot-stamp
18 parts for the cars.

19 VinFast, Your Honor, is simply caught in the
20 middle of what seems to be a broader dispute between two,
21 big steel companies.

22 Now, in light of this means-plus-function, I
23 don't know whether AM just assumed VinFast would not come
24 to court and defend itself or maybe show up halfheartedly
25 and dispute the issues halfheartedly. Neither of those

1 things happened. Here we are at trial.

2 What you will see, Your Honor, what the evidence
3 will show is that AM's case has completely collapsed under
4 the scrutiny of an ITC investigation. The breakdown
5 actually starts from the very first page of the patents
6 that shows the main figure, Figure 1.

7 Why is that.

8 Well, let me first tell you, Figure 1 is really,
9 really important for their case and that's because the
10 logic being that if a particular SEM that they rely on for
11 infringement in the domestic industry matches, looks more
12 like Figure 1, then the logic of their case is, oh, well,
13 then there's infringement, and there's domestic industry.

14 But if the SEM looks more like Figure 2, well,
15 then, there's no domestic industry, and no infringement.
16 That's how they positioned this case, Your Honor.

17 Now, leaving aside for a moment the legal
18 propriety of doing that analysis, as a matter of law, what
19 we learned in this case through discovery, and what the
20 evidence will show is that the steel part that gave rise to
21 Figure 1, this patent, did not come from AM or the
22 inventors.

23 The SEM in Figure 1 on the front cover, Your
24 Honor, was derived from a part created and manufactured and
25 supplied by a company called Magna.

1 This document, Your Honor, you will see in the
2 evidence, CX-683, this reflects SEM images that AM took
3 from the part that Magna gave AM.

4 Figure 1 that's in the patent is one of those
5 SEMs in this document.

6 The layers, the four layers that are critical in
7 this case that form the basis of infringement and domestic
8 industry, and frankly, these patents, were created in the
9 steel part manufactured by Magna, not AM.

10 Now, their case unwinds further from there, Your
11 Honor, and I'm going to touch upon some of those points
12 this morning, but let me briefly start by introducing my
13 client, VinFast.

14 VinFast, Your Honor, is a Vietnamese automotive
15 company founded in 2017 based in Hanoi. It's the first
16 Vietnamese car company brand to expand into global markets
17 as well as the first to expand into electric vehicles,
18 which has posited in this case.

19 The first and only factory at this time in
20 Vietnam in a city about two hours north of Hanoi.

21 It really is a start-up corporation, and now it
22 has started to make inroads into the United States market.

23 In fact, you see on this slide an important step
24 in that process where VinFast has committed to invest
25 2 billion into the construction of an automobile

1 manufacturing plant in Raleigh, North Carolina.

2 You see VinFast dealerships, Your Honor, popping
3 up here and there throughout the country.

4 The models at issue in this case are of course,
5 the VF 8 and the VF 9. The VF 8 was actually the first
6 automobile that sold in the US market.

7 Now, AM, you have heard about AM. Of course,
8 it's a massive company, that is the result, really, from
9 mergers and acquisitions starting from the acquisition of
10 Arcelor by the Mittal Steel Company in 2007.

11 Some of the documents you are going to see in
12 this case will just have Arcelor on them, and that's
13 because this merger happened in 2007.

14 You can see much of the operations are in
15 Europe. It's a vertically integrated operation such that
16 AMs do the mining of the iron ore all the way to the
17 production of the steel. Certainly, many tons of steel on
18 an annual basis.

19 What you see here, Your Honor, are of course,
20 the two patents at issue in this case .

21 The specifications are shared, Your Honor,
22 they're overlapping. It's really one specification. Of
23 course, the claims all require the four-layered structure,
24 that's key to the patents, and key to the claims.

25 The priority date as you were told was back on

1 October 30, 2006, so some time ago.

2 Now, what we have produced here, Your Honor, is
3 the priority history of the patents at issue in this case.
4 What we see from the '602 patent, Your Honor, it starts
5 with the original application that claim the '680 patent
6 that was filed in October of 2006. Then we had the '683
7 patent, and then of course, we have the patent at issue in
8 this case. '602.

9 Similarly, Your Honor, the '227, we start with
10 the '608, and then we have the '683 and 447, and then we
11 get to '227.

12 Why are these patents worth considering when
13 Your Honor looks at the evidence in this case.

14 What we have done here, Your Honor, is we have
15 produced a timeline, and identified all of the prior cases.
16 What you see here is the patent in this case. All what's
17 left is the '680 patent which is based on the filing in
18 October of 2006.

19 What you see, Your Honor, is that the '680 and
20 the '447, these patents are directed to a process of making
21 hot-stamped steel, a process of manufacturing.

22 If you look at the claims of those patents, they
23 incorporate the process, the oven temperature, the oven
24 time, the heating rates. This sort of thing that's in the
25 process of manufacturing the steel. That's what you see in

1 the priority patents.

2 But you see, Your Honor, what's important in
3 this case is when they come up here, and they're -- they
4 start talking about process parameters, and you heard a
5 bunch of it this morning, actually, about the process
6 parameters. The process is important, and you have heard
7 all of that, and it may be -- it may be very important.
8 But the patents at issue in this case are not process
9 patents, they claim a structure, and what's key is the
10 four-layered structure. That's the patents they claim.

11 When you come in to court and you start talking
12 about process, I think Your Honor should just note that
13 that's not the case we have here.

14 Now, the one patent in the priority chain, as
15 you see here, the '683, that is actually a patent directed
16 to a product, like this case. And what you see here is
17 that in an IPR, that patent was invalidated by the Patent
18 Office.

19 We submit, Your Honor, as you know, the patents
20 in this case share the exact same fate. Patents directed
21 to a structure, a four-layered structure that's been known
22 for a long time, way before the patents, and in fact, it
23 wasn't even derived by AM. That's what your evidence is
24 going to show.

25 Your Honor is probably familiar from the claims

1 from the reading, but this shows you what is claimed here.
2 Of course, the four layers are critical, and you don't see
3 a lick of these claims about the process.

4 This is a process of four layers that you heard
5 about here, Your Honor, this is Figure 1, which shows the
6 layers, and this is an embodiment of the claims according
7 to the patent. You're going to hear a lot about these
8 individual layers and how they're formed.

9 What you see here, Your Honor, is this Exhibit
10 CX-683, this is the document that was created by AM, and
11 the inventors here, Mr. Drillet and Kefferstein, this is
12 the document that reflects the SEM images from a part made
13 by Magna. This is November of 2005, so this is before even
14 what they say is their priority conception, which is
15 December of 2005, before that. It's of course way before
16 the filing of the patent in October of 2006.

17 Of course, this part reflects the process that
18 Magna did, in hot stamping the steel and creating the part
19 from Usibor 1500. Usibor, 1500, Your Honor, is the same
20 substance that you are going to see in the domestic
21 industry case that they rely on. This was done way before
22 the patent and Figure 1 was from a product created by
23 Magna.

24 You can see, of course, there's no dispute about
25 that. And you can just see by observing the two figures

1 side by side, you have the same sort of features at the top
2 with the valleys and the mountain areas, if you will. And
3 you are going to hear more about that, Your Honor, in the
4 evidence.

5 I want to start talking about validity, Your
6 Honor. It is a case about validity. You will recognize it
7 when you see the evidence.

8 When you see the evidence here in this case,
9 it's a really compelling case particularly because the
10 patent they decided to bring into this courtroom is a
11 product patent, and the four layers that are essential to
12 the claims have been around way before the patent, and you
13 are going to see the evidence on this, Your Honor.

14 You see here on the timeline, of course, since
15 the 1980s, you see hot-stamping was a technology,
16 manufacturing technology used for automobiles way, way back
17 when. In fact, hot-stamping with Usibor 1500, will you
18 hear that a lot in this trial, Your Honor, Usibor 1500,
19 which is the basis of the domestic industry case, the
20 Usibor 1500, the aluminum-coated steel has also been around
21 long before the patents in the case.

22 You will see here, Your Honor, in the lower
23 left, Arcelor itself was making Usibor 1500 for
24 hot-stamping since 2001 way before the priority date of
25 this case.

1 We know, of course, that Magna investigated the
2 different process parameters to come up with the four
3 layers, which became Figure 1 of the patent. Of course,
4 Magna sourced the steel from Arcelor, which was the Usibor
5 1500, but others, Your Honor, you see on the timeline,
6 which you will hear in the evidence, also hot-stamped
7 Usibor 1500.

8 You see here, Your Honor, Chrysler was working
9 with Magna as well to hot-stamp Usibor 1500 for use in
10 vehicles in the US market, and of course, the evidence will
11 show that the Volkswagen used to hot-stamp the Usibor 1500
12 was used -- the hot-stamped Usibor 1500 was used in the
13 passenger cage of the 2006 Passat, which was created, Your
14 Honor, and on sale, the evidence will show, in 2005, again,
15 before the priority date.

16 All of this prior art you see here, the prior
17 art, my friend on the other side reviewed that, I'm not
18 going to review it in detail. That's going to be in the
19 evidence. All of the prior art references, Your Honor, are
20 before the filing date of the patent of 2006.

21 Now, what you see here, Your Honor is an
22 internal document from AM. The timeline I just went over,
23 Your Honor, is not even being disputed in this case. This
24 is their own internal document. What do you see here? You
25 see here in the document itself, that 2001 was the first

1 user of the precoated, prehardened steel on bumper beams.
2 This was the A-Pillar. What did it use? It was
3 hot-stamped Usibor 1500. This was going on in 2001.

4 Then in 2005, you see here a specific mention
5 here of the precoated PHS, the prehardened steel using
6 Usibor 1500 on platform parts. Meaning this is part of the
7 cage, the passenger cage, what you see over here.

8 This happened, Your Honor, in their own
9 documents in 2005. Look what you see there on the side.
10 It's a Volkswagen Passat, 2005. This is their document,
11 Your Honor.

12 So they come in here, Your Honor, and say there
13 is no evidence of prior art. Into one knew about it. The
14 Patent Office didn't know about about it. Maybe the Patent
15 Office did know about it. What we know, the car is prior
16 art and confirmed by their own internal documentation.

17 Let me start on the Passat because it is quite
18 compelling. Of course, the CARFAX report you heard about
19 this morning and saw in the briefing is one piece of
20 evidence in a larger set of evidence. You see that here.
21 The Vin number ending in 1049 matches the assignment
22 records. This document demonstrates that the car was on
23 sale in August 2005 in Stanford, Connecticut. I remember
24 Connecticut because I'm from Connecticut. It was on sale
25 in 2005, Your Honor.

1 The evidence is very clear about that.

2 We also see, of course, the timeline I just
3 showed you from the internal document, but you see here
4 another document. You can see the evidence.

5 Again, this is an AM document. What do you see
6 here? Well, you see a discussion of the VW Passat, and
7 what do they say? The Passat was a major breakthrough.
8 The Passat was a game-changer, and from then, the race was
9 on. Their documents. That's what they say about the
10 Passat. What is the Passat? It is the Usibor 1500
11 hot-stamped steel with four layers.

12 We're dealing with a case that are product
13 patents. The case is over with the Passat, Your Honor, and
14 the evidence on this is absolutely compelling.

15 You see here, Your Honor, evidence you can see
16 in the case of the four layers. This was prepared by
17 Dr. Bradley, VinFast expert in this case. You can see
18 here, the four layers of the SEM that was prepared.

19 If the SEM, and compared to Figure 1 is good
20 enough for their entire case, well, it's certainly good
21 enough on the prior art side of the case, Your Honor. This
22 evidence is compelling that shows you what frankly their
23 internal documents already tell you, that the Passat is a
24 game changer.

25 All right. It is -- the race is on, and this is

1 the SEM that reflects the four layers. It's a game-changer
2 because it was the four layers that they say they invented.

3 Again, what you see here, that's exactly the
4 layer that shows up in the Passat.

5 Now, Your Honor, the Magna and Chrysler
6 interaction, which I earlier -- let's talk about that
7 briefly.

8 Now, what you see, Your Honor, is a document
9 that you will see in the evidence. This is a control plan
10 from Magna. It's a Magna document, and it has the
11 temperatures and the oven times, all of the details to make
12 the part. Again, this is a Magna production facility, and
13 it's Magna that is creating the control plan to make a
14 part.

15 You see this goes back to 2004 as the original
16 date of this document. This part, Your Honor, was made by
17 Magna in Eagle Bend, Tennessee, and, of course, it was done
18 by hot-stamping, and of course, Your Honor, we see here,
19 Usibor 1500. Usibor 1500 is the entire basis of the
20 domestic industry case. All of this staph was happening in
21 the prior art for care case. All of this was happening to
22 create the four layers that they say is critical to their
23 patents.

24 You are going to hear the testimony of the
25 deposition of a former Magna employee, Mr. Jacob Webb. He

1 is going to confirm that the process they had in 2004
2 continued on to this day, so there's a connection between
3 what they were doing back then for Usibor 1500 and what
4 they're doing now for the domestic industry case.

5 Now, you heard a bit about this from my
6 colleague on the other side about the conception date.
7 Now, the October 2006 date is the filing date of the patent
8 that at issue in this case, the '602 original patent.
9 That's the filing date. We have the 2000 -- August 2004
10 date on the '680.

11 The control patent.

12 Their view is, oh, well -- their view is that
13 this hot-stamped part was actually in August of 2006, and
14 they actually conceived the invention in December of 2005.
15 That's what you just heard in my colleague's opening, and
16 that's what they're going to argue in this case.

17 A couple of things about that. Number one, Your
18 Honor, this is nothing about the Passat. The Passat is
19 prior art. The dates don't work out for them.

20 That's problem one.

21 Problem two, Your Honor, is the Magna document
22 that's Figure 1, that the document created Figure 1 of the
23 patent, the Magna part was in November of 2005. That's
24 before December of 2005. That Was Magna's creation.
25 Magna's product.

1 But when we look at the evidence that they rely
2 on, Your Honor, to get to this December 2005 date, even if
3 they -- even if they move forward with this argument at
4 trial, what they presented, Your Honor, is a set of
5 documents with severely redacted and significantly redacted
6 portions.

7 You're not going to be able to rely on these
8 documents, and certainly not going to be able to bring
9 someone to this trial to testify about the details of any
10 particular meetings that happened because they made a
11 decision, a technical decision, to redact this, and this is
12 what they're stuck with, and this is all they have, a bunch
13 of generalization about timeline, but no details, and not
14 only -- this as a matter of law is not enough.

15 They have to have corroboration, corroboration
16 of the details of what they purportedly invented. They
17 made a decision to claim this as privileged, and the
18 problem has failed to that decision. These documents tell
19 you nothing. What else are we going to rely on? They rely
20 on a document generated by an intern, documents generated
21 after the alleged conception date, after the alleged
22 conception date.

23 We just think, Your Honor, that this is not good
24 enough.

25 Again, this whole argument about this December

1 2005, Your Honor, doesn't apply to the Passat. It doesn't
2 apply to a lot of the prior art we have on the slide. This
3 really is a matter of the Chrysler disclosure.

4 But even still, the evidence is going to fail.
5 They're not going to be able to prove another date.
6 They're stuck with October 2006, Your Honor. That's what
7 the evidence is going to show.

8 Now, in the prior art, Your Honor, here's a
9 listing of it. We're not going to go through the details.
10 Needless to say, the four layers, which of
11 course are critical to the claims, we're going to show you
12 these four layers in the prior art.

13 Now, there's some discussion about well, the
14 Patent Office considered it. The Patent Office has a
15 boxcar of prior art. I was a patent examiner years ago,
16 and when push comes to shove, they are going to come to
17 court and take a broad view of their claim and a broad view
18 of their patent. What's going to happen is the same thing
19 that happened to the '683 patent that the Patent Office
20 invalidated in the IPR. The result is invalidation. You
21 can see the four layers from each of those references here
22 on slide 27, and that's what the evidence is going to show.

23 You are also going to hear testimony, Your
24 Honor, confirming what I'm telling you this morning, which
25 is the four layers is prior art. It was done before the

1 patent. This is from the inventor, Mr. Drillet, who
2 acknowledges, had to acknowledge that the four layers were
3 created by the hot-stampers even in 2005.

4 Now, they're going to come in, well, it was
5 random. Couldn't really do it with certainty. We didn't
6 know. Everybody didn't know what they were doing. They
7 didn't know anything. That's what we told them. That is
8 the kind of thing you're going to hear.

9 What I respond to that, Your Honor, what we're
10 going to say, what our evidence will say, well, these
11 aren't inventive patents, these are not process patents,
12 they are product patents. Is the patent for your patent?
13 This is acknowledged by Mr. Drillet, the product with four
14 layers are prior art.

15 Your Honor, the case is over with that.

16 Now, what do they say? Well, one of the things
17 that they say, and that we didn't hear it this morning, so
18 maybe they're going to drop this, Your Honor, they say, oh,
19 well, this prior art is not enabled, is what they say.

20 In fact, Your Honor, they're pretty aggressive
21 about it, Your Honor. They say all of the prior art is not
22 -- is not -- their experts will tell you, maybe they'll
23 drop this, I don't know, none of it is enabled.

24 We just think, Your Honor, with respect, it's
25 far-fetched. The prior art is certainly enablement, Your

1 Honor. Quite literally, the Volkswagen Passat was driving
2 around Connecticut in 2005. It's enabled. The car was
3 driving around, and they made that.

4 Of course, Your Honor, we see some details in
5 these disclosures that you're going to see in the evidence.
6 For example, these are figures from the patent, the '602
7 patent. We see here some specification in the process,
8 three to six minutes at 930 degrees Celsius for a thickness
9 of 1.5 -- up to 1.5 millimeters. This is their process
10 detail.

11 If we look at some prior art, we are going to
12 see this in the evidence, Your Honor, well, it gives you
13 the same kind of process detail. The same kind of process
14 detail. It fits squarely in the same parameters that you
15 just saw in the specification. The thickness is 1.5
16 millimeters, you have five to ten minutes at 889 to 950C.

17 The prior art is certainly enabling, and that's
18 what the evidence is going to demonstrate.

19 Finally, the 112 issue. This issue is a product
20 of their making, because when they come into court and they
21 base their case on the domestic industry, is it Figure 1 or
22 is it Figure 2, that's their case, well, then, they have
23 created the zone of uncertainty that's the problem with
24 112, because now we're basing the scope of the layer on
25 comparing it to a figure, and walk right into the zone of

1 uncertainty, that, of course, the case law deals with when
2 you deal with 112 problems.

3 So it's not that the layer is an automatically
4 indefinite term because it's in one patent, it's indefinite
5 in all patents.

6 Now, they're applying in this case -- Your
7 Honor, I'm going to look at Figure 1 and Figure 2, and make
8 a judgment call, particularly when you hear the evidence.
9 At one point in time, Figure 1 is one SEM, and Figure 2, at
10 another point in time, is another SEM. The reason it's
11 important is because it's based on their analysis, based on
12 the way they're applying the claim.

13 With that, Your Honor, I'm going to jump into
14 the noninfringement issue.

15 You have heard about the two vehicles, and my
16 friend over here did mention the VF 9 vehicle. Your Honor,
17 there's zero evidence we're going to see an VF 9 in terms
18 of the technical implications. There's no SEMs you're
19 going to see. There's no analysis you're going to see.
20 It's just going to be a "me-too" type of proof.

21 We just think, Your Honor, that that's just not
22 enough evidence. They have got to show you the technical
23 infringement. They're not going to be able to do that
24 because they just didn't do it. They didn't do any SEMs,
25 they didn't do anything with respect to the SEMs and I

1 think what you are going to see in this case, what my
2 colleague already admitted candidly to you, you're going to
3 see situations where suppliers of the parts, where
4 sometimes they're not going to be Figure 1 of the patent,
5 in their parlance. I'll talk about that when I get to DI.

6 It's not the case, and I think the term I wrote
7 down here, if you don't do it right, you don't get the four
8 layers, is what my colleague said. If you don't get it
9 right, you don't get the four layers. So we know that the
10 process is real important. It's not claimed, for sure, but
11 it's real important to get the four layers, as they
12 indicated in their opening this morning and in their
13 briefing.

14 Well, they didn't do any analysis on the parts
15 for the VF 9, so we think that's a matter of burden of
16 proof. The VF 9 is not infringing for that reason.
17 There's no shortcuts or quick off-ramps for them.

18 I have already mentioned sort of the analysis
19 from the expert that they have presented in this case, Your
20 Honor. This is it. This is the Figure 1 versus Figure 2
21 analysis. That's what they have done to make their case
22 here.

23 The case law, Your Honor, we think is very
24 clear. Infringement is a very clear standard compared to
25 the claim. We don't compare it to the figures of the

1 patent. It's in the claim. The word "layer" has a plain
2 and ordinary meaning in this case, Your Honor. The parties
3 have agreed on that. You are going to hear some testimony
4 of what it means.

5 The testimony is, well, it's a continuous and
6 homogeneous layer. You will hear testimony that that's the
7 plain and ordinary meaning. But you have got to look at
8 the claim as interpreted by, ultimately, Your Honor, but
9 here, we have a plain and ordinary agreement of the
10 parties.

11 Figure 1/Figure 2 analysis, which is the basis
12 of their case, Your Honor, I think just fails as a matter
13 of law

14 Your Honor, this is a diagram of the VinFast
15 VF 8, and the red areas are the areas that are part of the
16 infringement case.

17 What you see here, Your Honor, on the right-hand
18 side is a piece of one of the pillars that AM's expert is
19 relying on. You see three red boxes. The parties in this
20 case have been calling those coupons. They're really just
21 little cutouts. What they rely on in this case, what you
22 are going to see, is basically an SEM in one of the
23 cutouts.

24 These parts -- that ruler is about 7 inches, I
25 believe, so the part is about 12 inches in length. It's a

1 small part. We have these coupons, and you have a single
2 SEM that they're relying on.

3 You see another view, Your Honor, here on the
4 next slide.

5 Again, you have this coupon, they have this SEM
6 created from the single coupon. And these dimensions, Your
7 Honor, are quite small. A hair is 60 microns, so we're
8 dealing with human hair type of dimensions here.

9 So for each part AM says infringes, what they
10 rely on, Your Honor, is a single SEM, that's the scale of a
11 human hair.

12 Now, we heard something about, oh, they have
13 binders and binders of SEMs. Well, Your Honor, we're going
14 by what their experts rely on. Their expert report relies
15 on a single SEM for this part. That's what they're relying
16 on. Then they're doing that for, you know, a large part,
17 and saying, there's four layers based on the single coupon
18 SEM.

19 So, you know, if you -- if the plain and
20 ordinary meaning is continuous and homogeneous across the
21 layer, across the part, we submit, Your Honor, the amount
22 of evidence of the single SEM image on the order of a human
23 hair, Your Honor, is not enough for them. They have got to
24 at least give you some analysis or statistical analysis of
25 how this applies more broadly across the part, not one

1 little dot, if you will. That's what the evidence is going
2 to show that they rely on.

3 We think that's a failure of evidence.

4 You see here, Your Honor, some more images that
5 they rely on for the VF 8 part, the SEM that was used.

6 Again, Your Honor, if continuous, homogeneous is
7 the plain and ordinary meaning that's going to govern in
8 this case, and of course, what you see here is a lot of
9 Swiss cheese and non-continuity in the SEM images. You are
10 going to hear more about this in the evidence, Your Honor.

11 Dr. Bradley also prepared some SEM images of the
12 VF 8 part, Your Honor, and you will see his work here. You
13 can really -- you don't see any defined layers at all from
14 what we can tell.

15 We just think, Your Honor, it's a failure of
16 proof problem on the VF 8, and of course, they have nothing
17 on the VF 9.

18 Let's talk about the domestic industry products,
19 Your Honor.

20 So you heard about this. My colleague did a
21 really good job explaining sort of the larger picture of
22 the domestic industry case, but you have heard about the DI
23 precursor products. They're listed here on the left-hand
24 side of the slide.

25 The one that's relied on most, Your Honor, you

1 will hear about most in the trial, is Usibor 1500. I have
2 already said that a couple of times today, and that was
3 done way before the products in this case. Hot-stamped
4 Usibor 1500, creating four layers. Prior art before the
5 patent.

6 So all of these different variations of
7 precursor products are at issue in this case.

8 You just note right off the bat, Your Honor,
9 that they have different labeling because they're
10 different. So it's important to keep in mind that you
11 can't extrapolate what might happen to one stamped part,
12 Usibor 1500, with respect to the 2000. We have to be more
13 robust in our analysis. On the right are the products in
14 this case. You don't have a patent covering the product, a
15 patent covering the product with the precursors. Until
16 they're hot-stamped, the layers don't form. It's the
17 hot-stamping where the action is.

18 And then on the right, you have the DI products,
19 call it the DI red box hot-stamped product. Of course,
20 they end up in the automobiles. You see here some of the
21 OEMs that are at issue in this case.

22 You heard about the precursor products of
23 manufacturers, Your Honor. There are just two on the DI
24 side of the case.

25 You heard about Cleveland-Cliffs, and you heard

1 about the joint venture between AM and Nippon Steel. Those
2 two companies are creating the precursors that are supplied
3 to the seven Tier 1 hot-stampers. They supply a lot more
4 than that, but the evidence in this case, Your Honor,
5 you're going to see -- the only evidence you are going to
6 see are the seven hot-stampers. These are the hot-stampers
7 that were subpoenaed that supplied evidence in this case.

8 That's important to keep that in mind, the seven
9 here that were subpoenaed, they don't have -- AM is not
10 going to give you any information about all of these other
11 hot-stampers. Turns out there's 51 total. So there's 51
12 other hot-stampers that you are not going to get any
13 information about that are also part of the supply chain
14 with respect to the domestic industry case.

15 We think it's a gaping hole in their evidence,
16 Your Honor. You are not going to get any evidence that's
17 over 60 percent of the domestic industry that they rely on.

18 Now, we summarized, Your Honor, attempted to
19 summarize here in an easy, digestible way, the problematic
20 analysis that they have moved forward with on the domestic
21 industry side of the case.

22 What you see here, Your Honor, are the 13 parts
23 that they rely on for domestic industry, and each one is
24 manufactured by one of those hot-stampers. Magna, frankly,
25 is the majority of this. Then you have an alleged DI

1 precursor product, and you have single SEM images that
2 their expert relies on for each one of these.

3 This is the state of the record, and this is
4 what you are going to hear about.

5 One of the problems out of the gate here is what
6 we have highlighted in yellow are four parts. These parts,
7 an SEM was created from each of these, and AM admits,
8 acknowledges, that they're nonpracticing.

9 So four of the 13 here are not practicing the
10 patent. So of course, they cannot be included. They can't
11 be included in any domestic industry economic analysis even
12 though they were.

13 But more fundamental than that, Your Honor, this
14 goes to the point that you can't take a shortcut on the
15 technical domestic industry case because we know that --
16 and as my friend acknowledged this morning, sometimes, you
17 know, the method -- they don't do it right, is the language
18 that was used. And we see that here, they don't do it
19 right.

20 These domestic industry products are
21 non-fungible. Some may be covered under their analysis,
22 Figures 1 and 2. We know that four, under their own
23 analysis, are not covered.

24 So there's no, oh, it's Usibor 1500; therefore,
25 it must practice the claim when it's hot-stamped. We have

1 evidence that that's, in fact, not the case. Their
2 evidence. That's a fundamental problem, Your Honor, we see
3 with their case.

4 We also see some disconnect because we don't
5 have a clear identification of the precursor product that's
6 used by the hot-stamper.

7 To break down their evidence, we know of one
8 case, Your Honor. In the case of Honda, the information we
9 have, and the discovery we have on that is it was produced
10 not by these two, the Calvert Company and Cleveland-Cliffs,
11 it was produced by a third precursor supplier, and there's
12 no analysis on the economic side.

13 We know one of the parts was produced in Canada,
14 which cannot be the basis of an economic product. This is
15 the breakdown of the domestic industry case, and we just
16 think it's a fundamental failure of proof.

17 This is an example, Your Honor, of the SEMs,
18 they're created for two of those four parts that are not
19 covered, under their own admission.

20 You see the SEMs, they say it doesn't look like
21 Figure 1. This looks more like Figure 2. That's the
22 analysis that they have given us in this case.

23 What they say is for manufacturing anomalies,
24 they say. I think, just to quote my friends, is they just
25 didn't do it right. The point is just because it's a

1 hot-stamp Usibor 1500, doesn't mean you are going to get
2 four layers. You can't draw that conclusion, and that's
3 what they're doing in this case.

4 We have created this graphic to simply
5 illustrate the problem.

6 So the left to the right. On the left we have
7 the two precursor suppliers, and they're supplying to the
8 hot-stampers. We know, I believe the number -- I heard
9 this morning it was 37.3 percent is the seven that were
10 subpoenaed making the 62.7 percent -- 37.3 and 62.7
11 percent. 62.7 were not subpoenaed. We have no information
12 about that. You have no technical domestic industry on
13 most of the domestic industry case.

14 And because we know that you can't assume,
15 because it's a Usibor product that's hot-stamped, that it
16 meets the four layers, it's a failure of evidence. You
17 can't consider any of the domestic industry numbers with
18 respect to the non-subpoenaed parties.

19 Then we go into the subpoenaed parties. We know
20 that some of these parts, the vast majority of the parts,
21 when you hear the evidence, Your Honor, weren't even
22 tested. Weren't even tested.

23 Then the ones that were tested, as we've already
24 discussed, there are many that are not even practicing the
25 patents.

1 So this is a fundamental breakdown of the
2 domestic industry case, Your Honor. Some of the numbers
3 are large, to be sure. We saw some of the numbers on the
4 slide from my colleague this morning, but you've got the
5 technical case. The technical case has to be tied to the
6 numbers. They can't do that. They are not going to be
7 able to prove that in this case because of the breakdown of
8 the analysis that they performed. It's just an evidentiary
9 gap, Your Honor, that is not solvable based on the record.

10 Then finally, Your Honor, I want to take a
11 moment to introduce our witnesses.

12 Ms. Nguyen is the VinFast CEO, the SMO. She is
13 based in Hanoi, she will be here, Your Honor, later in the
14 week to provide background about VinFast's operations.

15 Dr. Brown was formerly an MIT Professor, and he
16 went on to a consulting firm, and started his own firm
17 where he is now.

18 He will be here to explain his views on the
19 technical issues in the case and the domestic industry and
20 infringement, and of course, validity.

21 Dr. Bradley, Your Honor, is a research scientist
22 at the University of Hawaii. He is actually renowned in
23 material testing including the imagining he did with
24 respect to the NASA Stardust mission where the spacecraft
25 collected materials from the tail of a comet, and then came

1 back to earth, and the person at NASA that was called to do
2 the analysis on the precious samples taken was Dr. Bradley.
3 He collected it, prepared the samples and imaged the
4 samples.

5 So he's very renowned in the field, and he's
6 going to explain his experience, and also the imagining
7 work that he did.

8 Of course, you know Ms. Rowe, Your Honor, who
9 will be providing some of the economic aspects of the
10 domestic industry issues and provide some testimony.

11 With that, Your Honor, we look forward to
12 presenting our case.

13 JUDGE BHATTACHARYYA: Thank you.

14 Let's take a 15 minute break, and hopefully try
15 to deal with the sound issues.

16 MR. MCKEON: Thank you, Your Honor.

17 (A recess was taken at 11:15 a.m., after which
18 the hearing resumed at 11:42 a.m.)

19 JUDGE BHATTACHARYYA: Please be seated. On the
20 public record.

21 Is everything fine now?

22 Thanks, everybody, for your patience. We'll add
23 about 15 minutes on the end of the day to make up for the
24 technical issues.

25 Are we ready to start?

1 MR. HERSHKOWITZ: Yes, Your Honor. But before
2 we call our first witness, parties have an agreement that
3 at the start of each party's case-in-chief, they can
4 introduce depositions and the exhibits from folks that are
5 not here. So, for example, those Tier 1s.

6 So with your permission, I'd like to invite
7 Mr. Lee up to make that introduction into the record of
8 that material.

9 Thank you.

10 JUDGE BHATTACHARYYA: Sounds good. Thank you.

11 MR. LEE: Your Honor, Sung Bin Lee on behalf of
12 the Complainant.

13 For the record, the Complainant submitted by
14 e-mail this morning its list of deposition designations,
15 including the agreed-upon third-party designations and
16 accompanying exhibits.

17 At this point, I'm ready to hand off to the
18 Court, if I may approach the bench?

19 JUDGE BHATTACHARYYA: Yes, please.

20 I have before me a list of deposition
21 designations entitled "Complainant ArcelorMittal's
22 submission of witness testimony by deposition designation
23 from March 3rd, 2025."

24 I understand there's no objection to admission
25 of the exhibits on this list.

1 MR. COLAIANNI: No objection.

2 JUDGE BHATTACHARYYA: Then the exhibits on that
3 list are hereby admitted.

4 (Exhibits, as submitted by counsel and reflected
5 in the attached index, were received into evidence.)

6 MR. LEE: Your Honor, would you like me to read
7 off the names of the deponents on the list for the record?

8 JUDGE BHATTACHARYYA: It's not necessary, but if
9 you would like to do it for clarity of the record, I have
10 no problem with that.

11 MR. LEE: I'll just read off the names.
12 Mr. Jacob Webb, Mr. Brad Pepper, Mr. Brent Yeager,
13 Mr. James Chronister, Paul Belanger, Jennifer Hong, Rick
14 Nafziger, Haroldo Kavamura, Praveen Prakash, Nguyen Thi Lan
15 Anh, and Ronald Kefferstein.

16 JUDGE BHATTACHARYYA: Thank you, and please make
17 sure that Ms. Peters receives a copy of that list as well.

18 MR. LEE: Will do, Your Honor.

19 MR. HERSHKOWITZ: Your Honor, Benjamin
20 Hershkowitz on behalf of Complainant, ArcelorMittal.

21 We'd like to call our first witness. I'd like
22 to note for the record, the first two witnesses the native
23 language is French, not English. They have agreed to
24 testify in English, but just so we have a crutch in case,
25 we'll have a translator available will sit in the

1 translator seat. Her name is Ms. Lily Olm. I don't know
2 what procedure you want, if you want to swear in the
3 translator first, and then the witness, and then we can
4 proceed.

5 JUDGE BHATTACHARYYA: Yes.

6 I'll swear in the translator first.

7 Good morning, Ms. Olm.

8 Whereupon--

9 LILY OLM,

10 a French Interpreter, was first legally sworn to interpret.

11 MR. HERSHKOWITZ: Your Honor, if I may now call
12 the first witness,

13 Mr. Jean-Luc Thirion, to the stand.

14 JUDGE BHATTACHARYYA: Good morning. Could you
15 please raise your right hand.

16 Whereupon--

17 JEAN-LUC THIRION,

18 having been first duly sworn, was examined and testified as
19 follows:

20 JUDGE BHATTACHARYYA: Thank you.

21 MR. HERSHKOWITZ: May I begin, Your Honor?

22 JUDGE BHATTACHARYYA: Yes.

23 MR. HERSHKOWITZ: Thank you.

24 DIRECT EXAMINATION

25 BY MR. HERSHKOWITZ:

1 Q. Mr. Thirion, could you please introduce yourself
2 to the Judge and the court reporter?

3 A. I'm the Jean-Luc Thirion, and I am the CEO of
4 the global research and development organization at
5 ArcelorMittal.

6 Q. Where are you based, Mr. Thirion?

7 A. I'm based in France.

8 Q. Mr. Thirion, do you have a business degree?

9 A. I have a business degree, an MBA, on top of an
10 engineering degree.

11 Q. How many years have you been with ArcelorMittal?

12 A. 34 years.

13 Q. What are your current responsibilities as CEO of
14 the global R&D organization at ArcelorMittal?

15 A. My role is to work with the external customers
16 to understand the trends and the needs of the market, and
17 to work with internal customers to align the innovation
18 policy with ArcelorMittal.

19 Q. What position did you hold at ArcelorMittal
20 prior to becoming the CEO of the global R&D organization?

21 A. I was already a member of the leadership team of
22 the research and development organization at ArcelorMittal,
23 and my role was general manager in charge of product
24 research and development.

25 Q. During what time period did you hold the

1 position of general manager of products at the R&D
2 organization?

3 A. In 2009 and 2024.

4 Q. What did you do in that role, what were your
5 responsibilities?

6 A. My responsibility was to lead the product R&D
7 activities, especially defining the strategic point,
8 working with external customers to define -- or to
9 understand and define their needs. Also, working with
10 internal customers to align our innovation policy with
11 their strategy.

12 Q. Which products were you responsible for as
13 general manager of research and development?

14 A. All steel products.

15 Q. What markets did those steel products cover?

16 A. The steel product cover multiple markets,
17 multiple applications.

18 First of all, automotive, which is a major
19 market for the steel industry, but also construction,
20 packaging, metal processing, and energy.

21 Q. What are ArcelorMittal's lines of business?

22 A. We have two lines of business.

23 First, steel products, and then I run all
24 mining.

25 Q. What industries does ArcelorMittal serve in its

1 steel business, line of business?

2 A. We are serving quite all the applications of
3 steel, first of all, automotive, but also as mentioned,
4 construction, energy, packaging and processing.

5 Q. What industries does ArcelorMittal serve in the
6 United States?

7 A. In the United States the same industries are
8 served. The breakdown between the regions might be
9 different, but in the United States, the major market is
10 automotive.

11 Q. Does ArcelorMittal have a significant operations
12 in the United States?

13 A. Yes, indeed. Through ArcelorMittal North
14 America, we have a number of sites, more than 20 sites in
15 the United States. For instance, a huge production plant
16 in Calvert, Alabama, but also production of iron in Corpus
17 Christi, Texas.

18 We have mentioned also the production of laser
19 welded blanks in Detroit, Michigan, and the last example is
20 our research center in East Chicago, Indiana.

21 Q. Why is there a research center for global R&D in
22 East Chicago?

23 A. The automotive market is extremely important in
24 the USA, and our resources in Indiana is an historical
25 research center dedicated especially on R&D.

1 Q. How many research and development centers does
2 ArcelorMittal have worldwide?

3 A. 14 research centers.

4 Q. How many employees work for ArcelorMittal's
5 global research center?

6 A. Currently, we have 1700 employees.

7 MR. HERSHKOWITZ: Your Honor, if we could just
8 go on the confidential record for a few questions.

9 JUDGE BHATTACHARYYA: Yes.

10 Going on to the ArcelorMittal confidential
11 record.

12 Could counsel for both sides please confirm
13 there are no unauthorized people on their sides.

14 MR. HERSHKOWITZ: We are confirmed, Your Honor.

15 JUDGE BHATTACHARYYA: All right. You are
16 confirmed for your side, or for both?

17 MR. HERSHKOWITZ: Both.

18 JUDGE BHATTACHARYYA: Thank you.

19 (Whereupon, the trial proceeded in confidential
20 session.)

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1 O P E N S E S S I O N

2 BY MR. HERSHKOWITZ:

3 Q. How many ArcelorMittal research and development
4 employees are based in the United States?

5 A. We have around 150 employees in the United
6 States.

7 Q. How many of those ArcelorMittal US-based
8 research and development employees are dedicated to the
9 automotive industry?

10 A. Most of them are directly or indirectly
11 dedicated to the automotive business for product research
12 or for process research to support the development in the
13 automotive business.

14 Q. Where are those US-based employees located?

15 A. The vast majority of the employees are located
16 in East Chicago, Indiana, research center.

17 Some of them are closer to the customers, for
18 instance, in the Southfield, Michigan or in Nashville,
19 Tennessee.

20 Q. Who can explain US research and development
21 organizations' activities in more detail?

22 A. Bala Krishnan who leads the activities in
23 relationship with carmakers, and Mark Atkinson, who is the
24 head of our research center in East Chicago can give more
25 details on that.

1 Q. Generally, what kind of products does
2 ArcelorMittal provide to the US automotive industry?

3 A. We provide to the automotive business flat
4 products, which are produced in coils.

5 Q. Are there any other types of products that are
6 provided?

7 A. Yes. We produce also intermediate products
8 called laser ready blanks, which are produced in Detroit by
9 our subsidiary, ArcelorMittal Tubular Blanks.
10 (Clarification requested by the Realtime Stenographer.)

11 Q. Generally, how are flat products used in
12 automotive applications?

13 A. Flat products and coils are used for the
14 so-called body-in-white. That means the frame, the
15 structure of the vehicles. They are used also for hang-on
16 parts like doors or hoods or tailgates.

17 Q. Are Usibor and Ductibor examples of flat steel
18 products?

19 A. Yes.

20 Q. In what ways does ArcelorMittal's US-based
21 research and development organization support the Usibor
22 and Ductibor products?

23 A. Our US organization supports Usibor and Ductibor
24 in at least three ways.

25 The first one is contributing to the development

1 of new product. That means organizing the industry on
2 trials with our plants in Calvert, for instance.

3 The second point is to support the daily
4 production in Calvert of this product in order to improve
5 for the betterment of the plant, and the third way is in
6 direct relationships with our external customers to promote
7 the product and organize improvements of new product.

8 Q. You mentioned Calvert. Is the Calvert facility
9 considered an internal client?

10 A. Yes. Absolutely.

11 What we mean with internal customers are the
12 business unit's operations and professional organization of
13 our business.

14 Q. You also mentioned external clients. Who are
15 the external clients for the ArcelorMittal US-based
16 research and development organization?

17 A. Typically, external clients are carmakers,
18 companies like General Motors, Ford, Toyota, but also
19 Tier 1 suppliers. Tier 1 suppliers are companies like
20 Magna or Gestamp. They are in charge of producing parts or
21 models and to ship these parts and these models to the
22 carmakers.

23 Q. Now, are you an expert in hot-stamping?

24 A. I am not.

25 Q. At ArcelorMittal, were you ever involved with

1 developing processes or process parameters for
2 hot-stamping?

3 A. No.

4 Q. Who at ArcelorMittal can explain the scientific
5 details of hot-stamping?

6 A. Pascal Drillet is our senior scientist in this
7 domain, and he can explain that.

8 Q. Who can explain how ArcelorMittal's Tier 1
9 customers, those hot-stampers, conduct their hot-stamping
10 operations?

11 A. Bala Krishnan can explain that.

12 Q. How does the US research and development
13 organization interact with external clients such as the
14 Tier 1s?

15 A. So, first of all, our teams in charge of the
16 customer contacts promote the products; that means that
17 they showcase the performance of our products, and once the
18 customers are convinced they are in charge of organizing
19 the approval actions, that means testing the products for
20 the carmakers.

21 Q. Who can explain the technical and commercial
22 aspects of these interactions?

23 A. The commercial aspects can be explained by Peter
24 LeBlanc who is the chief marketing officer of ArcelorMittal
25 in North America.

1 Q. Who can explain the technical aspects of these
2 interactions?

3 A. Technical aspects can be explained by Bala
4 Krishnan.

5 Q. Did you review the two patents being asserted
6 against VinFast for this investigation?

7 A. No, I did not.

8 Q. Does ArcelorMittal have other patents on
9 aluminized steel?

10 A. Yes. We have broad portfolios of patents in
11 this domain because this is a regular domain for
12 ArcelorMittal and for the market.

13 Q. Does ArcelorMittal license its patent portfolio
14 on aluminized steel?

15 A. Yes. We license especially some competitors.

16 Q. Who can speak to ArcelorMittal's licensing
17 practices for its aluminized steel?

18 A. The licensing policy can be explained by Peter
19 LeBlanc.

20 Q. Switching gears, what are the trade names for
21 ArcelorMittal's aluminized steel sold in the United States?

22 A. Usibor and Ductibor.

23 Q. In what industries are Usibor and Ductibor sold
24 into in the United States?

25 A. Mostly for the automobile business.

1 Q. Are there several different types of Usibor and
2 Ductibor?

3 A. Yes. There are several types of products,
4 depending on the mechanical properties that we want to
5 reach on the final parts. For instance, the main product
6 is called Usibor 1500, meaning that we reach 1500 Mega
7 Pascals on the final product.

8 Q. Who at ArcelorMittal can best explain the
9 details on the marketing and sale of the Usibor and
10 Ductibor products in the United States?

11 A. For marketing and sales, Peter LeBlanc.

12 Q. Who at ArcelorMittal can best explain the
13 metallurgical properties of these products?

14 A. Pascal Drillet will explain the metallurgical.

15 Q. At a very high level, how are aluminized Usibor
16 and Ductibor made before hot-stamping?

17 A. The base material goes into a pot, which is
18 filled with liquid metal, liquid aluminum, and the liquid
19 aluminum is then cooled down quickly. So the product is
20 coated by mag aluminum.

21 Q. Where are the Usibor and Ductibor products
22 manufactured in the United States?

23 A. It is manufactured in Calvert, Alabama.

24 Q. Who can best explain the manufacturing process
25 for Usibor and Ductibor at Calvert?

1 A. At Calvert, Chris Richards is the CEO of the
2 plant.

3 Q. We have mentioned Usibor and Ductibor for a
4 while. So what is Usibor?

5 A. Usibor is a product dedicated to hot-stamping.
6 This is a product which is coated with an aluminum silicone
7 coating. And this is a product which after hot-stamping
8 allows to reach a very high level of strength.

9 Q. How is Usibor used in cars?

10 A. It is used in cars to protect the passengers, to
11 protect the cage of the vehicle, in case of a side or
12 forward crash.

13 Q. What specific parts of an automobile is Usibor
14 used for?

15 A. Multiple parts, but very important parts for
16 this product are the A-pillar and the B-pillar.

17 Q. What is Ductibor?

18 A. Ductibor is also a product for hot-stamping
19 coated with aluminum silicone, and this is a product, which
20 is more ductile than Usibor. That means it is more
21 deformable than Usibor.

22 Q. What parts of an automobile is Ductibor used
23 for?

24 A. It is used for the lower parts of the A-pillar
25 and B-pillar because it allows to absorb the energy and

1 avoid transmitting the energy to the passengers.

2 Q. You mentioned both Usibor and Ductibor can be
3 used to construct a B-pillar. How does that work?

4 A. In many cases, it is done through the technology
5 of laser welding.

6 Q. At ArcelorMittal, are laser welded blanks the
7 same thing as another name for that tailor welded blank?

8 A. Yes.

9 Q. What is the benefit of laser welding Usibor and
10 Ductibor into a single part from a business perspective?

11 A. For the carmakers, it is a way to put the right
12 metal with the right thickness at the right place. It's a
13 way to save metal, to optimize the use of the metal. So
14 optimize the cost, improve the passenger safety, improve
15 the weight of the vehicle.

16 Q. What is the benefit of combining Usibor and
17 Ductibor in a single car part for the occupants of the
18 vehicle, the passengers?

19 A. Really, it's a drastic improvement in terms of
20 passenger safety, but also as it saves -- reduces the
21 weight of the part, it allows to improve, for instance, the
22 fuel efficiency, and to reduce the CO2 emissions.

23 Q. Does ArcelorMittal hot-stamp Usibor and Ductibor
24 commercially?

25 A. No, we don't.

1 Q. Who does the hot-stamping of Usibor and
2 Ductibor?

3 A. So hot-stamping can be done sometimes by
4 carmakers, but more often by Tier 1 suppliers.

5 Q. Does ArcelorMittal provide the Usibor and
6 Ductibor to those Tier 1s?

7 A. Yes. We provide the Usibor and Ductibor in cars
8 to the Tier 1 or in laser welded blanks.

9 Q. Does ArcelorMittal consider Usibor and Ductibor
10 to have been successful products for ArcelorMittal?

11 A. Yes. It has been a very significant business
12 success. For instance, in 2023, in North America between
13 ArcelorMittal and our licensees, more than half a million
14 tons of this product was sold.

15 MR. HERSHKOWITZ: Thank you, Mr. Thirion.

16 Your Honor, I pass the witness.

17 JUDGE BHATTACHARYYA: Thank you.

18 MR. COLAIANNI: Your Honor, I'm going to have a
19 few questions on the ArcelorMittal confidential record, so
20 perhaps we can just take care of that now.

21 JUDGE BHATTACHARYYA: Okay. We're moving on to
22 the ArcelorMittal confidential record.

23 Could you please confirm there are no
24 unauthorized people present on your side of the room.

25 MR. COLAIANNI: Yes. That's confirmed, Your

1 Honor.

2 JUDGE BHATTACHARYYA: All right. Thank you.

3 MR. HERSHKOWITZ: All set, Your Honor.

4 JUDGE BHATTACHARYYA: Great. Thank you.

5 (Whereupon, the trial proceeded in confidential
6 session.)

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1 O P E N S E S S I O N

2 MR. HERSHKOWITZ: Your Honor, we're just getting
3 the next witness who was sequestered until his testimony.

4 Please, bear with us for a moment.

5 JUDGE BHATTACHARYYA: Very well, thank you.

6 MR. HERSHKOWITZ: Your Honor, to start the next
7 witness, we don't need to be on the confidential record.
8 We've invited everybody back in, but we should probably
9 confirm the sign.

10 JUDGE BHATTACHARYYA: Yes.

11 MR. HERSHKOWITZ: Thank you.

12 JUDGE BHATTACHARYYA: We're on the public
13 record.

14 MR. REITER: Good morning, Your Honor.

15 JUDGE BHATTACHARYYA: Good morning.

16 MR. REITER: Mark Reiter for the Complainants.
17 We are now ready to call our next witness,
18 Dr. Pascal Drillet.

19 JUDGE BHATTACHARYYA: Good morning, Dr. Drillet.

20 MR. REITER: If I may approach, Your Honor.

21 JUDGE BHATTACHARYYA: Could you please raise
22 your right hand.

23 Whereupon--

24 PASCAL DRILLET, PhD,
25 having been first duly sworn, was examined and testified as

1 follows:

2 THE WITNESS: The truth and only the truth.

3 JUDGE BHATTACHARYYA: You're supposed to swear
4 or affirm that the testimony you will provide will be the
5 truth.

6 THE WITNESS: Yes, the testimony I will provide
7 will be the truth.

8 JUDGE BHATTACHARYYA: Thank you.

9 (Off the record.)

10 MR. REITER: Your Honor, Dr. Drillet is going to
11 testify in English. But as you can tell, he's a native
12 French speaker. We have the translator. If there are
13 things that he needs help with, if it's okay with the
14 Court, he may ask.

15 JUDGE BHATTACHARYYA: Yes. Of course.

16 MR. REITER: Okay. Thank you.

17 DIRECT EXAMINATION

18 BY MR. REITER:

19 Q. Good morning, Dr. Drillet.

20 A. Good morning.

21 Q. Could you please introduce yourself for the
22 Court. What is your name?

23 A. My name is Pascal Drillet.

24 Q. Where do you live, Dr. Drillet?

25 A. I am living in France.

- 1 Q. Where in France?
- 2 A. East of France, near Metz.
- 3 Q. Is that the western part of France or the
- 4 eastern part of France?
- 5 A. Eastern part of France.
- 6 Q. Near the German border?
- 7 A. Near Germany. Not very far.
- 8 Q. Where are you employed?
- 9 A. I'm employed by ArcelorMittal.
- 10 Q. What is your current position at ArcelorMittal?
- 11 A. My current position is I am a program manager of
- 12 the development of press-hardened steel for steels and
- 13 coatings.
- 14 Q. Program manager for press-hardened steel?
- 15 A. Yes.
- 16 Q. How long have you worked for ArcelorMittal?
- 17 A. I started to work for the company in 1991.
- 18 Q. Was it called ArcelorMittal then?
- 19 A. No. At that time, it was UC, which was a
- 20 laboratory near Paris. So after that, we became Usinor,
- 21 Arcelor, or ArcelorMittal. We changed a lot of the name of
- 22 the company.
- 23 Q. Many different iterations of the company?
- 24 A. Sorry.
- 25 Q. I said there was many different iterations, many

1 different names of the company?

2 A. Yes.

3 Q. Before we get into the substance of your
4 testimony, I'd like to introduce you to the Court a little
5 bit more.

6 Could you explain to the Court your educational
7 background.

8 A. Yes, I can summarize my education.

9 I started with a master in physical chemistry
10 from the School of Chemistry of Rennes. After that, I have
11 also made master in engineering from Rennes also.

12 I finished with a PhD in material science and
13 engineering at the School of Chemistry of Rennes.

14 Q. When did you get your PhD?

15 A. In 1991.

16 Q. What did you do after you received your PhD?

17 A. I come to UHC, the company, just after my PhD.

18 Q. And that company was later acquired through a
19 number of transactions and became ArcelorMittal?

20 A. Yes.

21 Q. What are your current responsibilities as R&D
22 program leader for hot-stamping?

23 A. Concerning program, I am responsible for the
24 development of new steel and new coatings dedicated to
25 press-hardened steel. Also, an understanding of the

1 process, we'll see that later as hot-stamping and the
2 specific process regarding --

3 (Clarification requested by the Realtime Stenographer.)

4 A. The process we use regarding that in our
5 company. ArcelorMittal is quite a hot-stamper.

6 Q. Let's continue on and talk about your patents or
7 the problem that you faced when starting with the patent.
8 Let's go to the next slide, please.

9 Do you recognize these two documents,
10 Dr. Drillet?

11 A. Yes.

12 Q. What are they?

13 A. The two patents we have filed on Usibor.

14 Q. Are you one of the inventors on this patent?

15 A. Yes.

16 Q. Let's talk a little bit about the work that you
17 did that led to your invention. What were you doing, and
18 what did the company ask you to do that got you on this
19 project that generated the two patents that are at issue?

20 A. So after the original patent, we had seen this
21 solution had probably a very interesting potential for the
22 automotive market.

23 Q. Let me interrupt you. What are we seeing on the
24 screen right now? What is on the screen?

25 A. On the screen is -- it is the original patent.

1 Q. The original patent?

2 A. Yes. At that time, we had only a few parts made
3 by hot-stamping. So the company asked me to try to
4 increase the number of parts for the automotive market
5 particularly to try to put this kind of part in the
6 body-in-white, and we will explain later for the
7 body-in-white. In the beginning, it was made --
8 (Clarification requested by the Realtime Stenographer.)

9 Q. Can repeat your answer, please. In the
10 beginning, it was made -- Dr. Drillet, can you repeat what
11 you just said?

12 A. My last -- all the answer?

13 Q. Just the last part of your answer.

14 A. The last part. Yes. Okay. Sorry.

15 At the beginning, the main part made by Usibor
16 was also this original patent was bumper beam of the car.

17 Q. Bumper beam?

18 A. Bumper beam. Few parts. The challenge was to
19 increase the market.

20 Q. You had been using the name Usibor.

21 What was Usibor? What was Usibor?

22 A. Usibor is a coating solution with steel glaze to
23 make -- if you are talking about Usibor 1500. Usibor 1500
24 is steel with aluminum pre-coating.

25 Q. When did the company ask you -- what year did

1 you start on this project when the company asked you to
2 increase the sales?

3 A. So I have -- I entered this topic between the
4 end of 2003 and the beginning of 2004.

5 Q. Let's go to the next slide, please.

6 What do we see on this slide, Dr. Drillet?

7 A. This one is an example of the body-in-white I
8 discussed previously.

9 What you can see -- what is the body-in-white,
10 first. The body-in-white is the skeleton we have around
11 the area of the driver and the passenger in order to give
12 sort of a safety area for crash, mainly for crash.

13 So on this picture, you can see that you have
14 two kinds of product, two kind of colors. The Usibor is on
15 red, and the aim of the Usibor is to give an intrusion
16 property during crash to avoid any damage inside the area
17 of the driver and the passenger.

18 Q. What is the other color; what type of steel is
19 that?

20 A. The other color is the Ductibor type of --
21 Ductibor 500 point here. The name of this material. This
22 product is more tight ductile. It is more ductile. The
23 aim of this matter is to absorb the energy during a crash.

24 The red part is outward intrusion, and the other
25 part is for absorption part.

1 Q. How are all of these parts put together for the
2 body-in-white? How does the carmaker assemble those?

3 A. The Usibor with the Ductibor, it is also welded
4 blanks application.

5 Q. So you were explaining that the steel is very
6 strong, high-strength steel. I think we have a video --

7 A. Yes.

8 Q. -- that shows this.

9 Can you explain what this shows.

10 A. It shows the capabilities, the very high
11 capability of this high-strength material to resist
12 deformation and also to resist any breakage during the
13 crash.

14 You have an example there of a three bending
15 test, which is also a crash test. You can see that this
16 part resists a break. You have no breakage of the part.

17 Q. Is it important that the part -- the steel not
18 break?

19 A. Yes. Yes. For the safety of the driver.

20 Q. So when we are talking about this high-strength
21 steel, we heard something during the opening about 1500
22 Mega Pascals.

23 Can you explain what that is in terms that I can
24 understand.

25 A. Just to give you an idea. So you have the

1 translation of 1500 MPa, parts per square inch on this
2 graph, just to imagine what kind of pressure is it, it
3 should be like to have 1500 elephants on your head.

4 Q. Elephants. I thought that might be something
5 that you weren't expecting.

6 So that's -- how many pounds per square inch
7 does that equate to?

8 A. 225,000. 225,000 pounds per square inch. It's
9 written here.

10 Q. I know that you're used to talking about metric
11 system and all, and I appreciate the conversion.

12 Earlier, you had mentioned 22MnB5 steel.

13 What is that?

14 A. What is the 22MnB5, is quite old steel. It's
15 like patented by ArcelorMittal. The nomenclature of this
16 quality of steel is also quite old. What does it mean
17 22MnB5? It means that 22 carbon. 22 that means 00.22
18 percent of carbon. Mn means you have manganese inside the
19 chemistry. B is for boron. You have boron inside. And 5,
20 the number 5 gives an idea of the concentration of
21 manganese to divide by 4.

22 Q. Is 22MnB5 steel ultrahigh-strength steel?

23 A. No. This metal is not a high-strength steel.
24 This metal became a high-strength steel during
25 hot-stamping. During the austenization of the material.

1 Q. Now, you also referenced a coating on this
2 22MnB5 steel. What do we see on this next slide?

3 A. So on this slide, we have a cross-section of the
4 pre-coated steel. On the -- you can see the steel at
5 22MnB5 steel microstructure on this graph. It's a
6 ferritic-pearlitic steel.

7 (Clarification requested by the Realtime Stenographer.)

8 A. The pre-coating is made by hot dip. So during
9 the transfer of the steel inside the bath, we have a
10 chemical reaction of dissolution/precipitation of the
11 surface of the steel, which led to a layer you can see here
12 on the screen with the dissolution/precipitation layer.
13 And the rest of the coating is a composition of the bath.

14 So when we are talking about aluminized coating,
15 we have to take into account both layers. So this
16 dissolution precipitate reached Al-Si.

17 Q. Al-Si.

18 I'm looking at the slide, and I think I noticed
19 a typo. My fault.

20 Is this before or after hot-stamping, this
21 image?

22 A. Yeah.

23 Q. Which is it, before hot-stamping or after
24 hot-stamping?

25 A. This one exactly is a pre-coated steel at

1 delivery before any hot-stamping coming from our
2 aluminizing line -- using the aluminizing line.

3 Q. So now, in trying to meet the challenge that
4 your company put to you, to develop this steel, what were
5 some of the challenges that you had?

6 A. So when we were asked to present this solution
7 for the carmakers market, we had to -- three main
8 challenges.

9 The first one was safety. We have seen in
10 France this kind of matter of the crash in test.

11 The second one is corrosion against -- the
12 protection against corrosion because we have to give
13 certain durability to our customer.

14 The third one will be due to the CO2 emission.
15 So the carmaker are asking for, at that time, for a huge
16 weight reduction of the cars. So the use the highest
17 strength steels help us to get to weight reduction.

18 Q. I see weldability and paintability. What do
19 those have to do with it?

20 A. This one, the carmakers, weldability,
21 paintability and so on, parameters dealing with these
22 properties because, of course, we need certain protection
23 against corrosion, we need to have a good paintability of
24 the steel, coated steel.

25 As we have to mount different kinds of parts on

1 the body-in-white, now, you have to mount these parts by
2 spot welding process. So that means that this kind of --
3 we need to provide metallurgy which is spot weldable.

4 Q. So let's go to the next slide.

5 Can you explain --

6 JUDGE BHATTACHARYYA: Sorry to interrupt,
7 Mr. Reiter.

8 As you are going through the slides, it would be
9 helpful if you could identify exactly which slide you are
10 asking questions about.

11 MR. REITER: I'm sorry, Your Honor. Judge
12 McNamara made me do that, too, the last time I was here.

13 I'm bad at that.

14 BY MR. REITER:

15 Q. So we're on slide 12 now.

16 Could you explain, Dr. Drillet, what this slide
17 is showing with respect to the product before its process.

18 A. This slide is showing us the pre-coated step
19 before any treatment.

20 So at this step, the aluminizing coating, we
21 have at the surface of the steel prevent any corrosion or
22 oxidation with the process.

23 Q. What about during processing on slide 13, the
24 next slide; what does this show?

25 A. This one, it's the step, we have the

1 hot-stamper. So we can see here that during the
2 austenization -- so austenization is made at the very high
3 temperature, so we have to prevent the surface of the steel
4 from any oxidation during this step.

5 So the purpose of this aluminizing pre-coating
6 solution is to prevent, protect, the surface of the steel
7 for -- from any oxidation.

8 Q. Now, did the coating provide or create any
9 problems for the processing?

10 And perhaps we can look at slide 14, the next
11 slide.

12 A. So concerning the -- here there are two
13 examples.

14 One was concerning the hot-stamper.

15 Another concerning the carmaker because the
16 press-hardened steel product, we have two kinds of
17 customer, Tier 1, which is the hot-stamper, and the last
18 customer, which is the carmaker.

19 So concerning the hot-stamper, as the coating
20 has to be transformed inside the oven at a very high
21 temperature, we have this risk to deposit a lot of liquid,
22 and this was aluminum, mainly the aluminum coating will
23 melt during austenization. We have to be careful not to
24 put an excessive deposition of liquid to the surface of the
25 rolls of the hot-stamper.

1 So the main -- the first topic we have to be
2 careful.

3 Q. Okay.

4 What about the welding that's shown here on
5 slide 14?

6 A. On the second one, it's the carmaker are asking
7 us a certain range of spot weldability, so it is necessary
8 for us to ensure that the material we give to the carmaker
9 will be spot weldable in the good range requested by the
10 carmaker.

11 Q. This statement of problems, where does that come
12 from? What are we reading from?

13 A. This concerning the spot weldability?

14 Q. Yes.

15 A. That we -- the spot weldability would have come
16 from the steel -- sorry, the coating surface, and you will
17 see that later. But the coating surface at the end of the
18 whole process, the full austenization, the quenching of the
19 part as well, is very important for the use properties of
20 the carmaker, the spot welding and painting because
21 everything is done at the surface of the coating.

22 Q. So let's talk about the process a little bit, if
23 we could go to slide 15, please.

24 What does slide 15 show, Dr. Drillet?

25 A. This one, it's a scheme. You have already seen

1 the scheme. The scheme, which describes the different
2 steps of the full hot-stamping process.

3 The first step is to -- for us -- to deliver us
4 a coil, a pre-coated coil that you can see here at the
5 hot-stamper. The hot-stamper will be a carmaker, because
6 some carmakers are also hot-stampers.

7 So the coil has to be cut into blanks with
8 specific shape with regard to the final part. For a
9 pillar, the shape of the blank will be close to the shape
10 of the pillar. The blank has to be transferred into the
11 oven at a high temperature, around 900 degrees C.

12 In order to transform the ferritopearlitic
13 microstructure into the full microstructure. So the first
14 step, which is important to control of the hot-stamping,
15 which the reason why we talk the austenization because we
16 have to make the full austenitic state of the steel. It is
17 the first austenization we have inside the oven.

18 The second one is the coating. You can imagine
19 that the coating at such high temperature will completely
20 transform -- will be completely transformed.

21 As soon as we are finished with this fast
22 austenization, we exit the blank from the oven into the
23 press.

24 Q. What happens at the press?

25 A. So the press is -- it's a quite complex

1 phenomenon because inside the press we have a simultaneous
2 reaction between quenching, the transformation of the
3 austenite, martensite on deformation. We make the press,
4 and we quench at the same time.

5 Q. What is quenching? What does that mean?

6 A. The quenching, it's transformation of austenite
7 to martensite.

8 Q. Austenite to martensite.

9 Is that at a high temperature, the quenching?

10 A. The quenching, no. It will ensure that we
11 have -- the quenching is made into the austenitic state, so
12 it's at a high temperature for the steel.

13 Q. During quenching --

14 A. During quenching, you have to wet or cool the
15 dies in order to ensure that the critical temperature will
16 be high enough to get martensite.

17 Q. What is important about martensite? Why is
18 martensite important?

19 A. Martensite, when we talk about
20 ultrahigh-strength steel, ultrahigh-strength steel is given
21 by the martensite, by the martensite state.

22 Q. Do you have a video that briefly walks us
23 through the hot-stamping process?

24 A. Yes.

25 Q. If we could start the video, and you can

1 explain, Dr. Drillet, what we're seeing here based on your
2 description.

3 So what is this?

4 A. This is a video from the stamper.

5 Q. Let's start it back up, please.

6 A. What we can see on this movie, the first coil,
7 delivering coil, pre-coated coil, you can see here the
8 cutting step of this coil into blanks.

9 Q. So what's happening here, are they shaping the
10 parts?

11 A. Yes.

12 You can see it has a specific shape.

13 So these blanks are transferred into an oven by
14 a robot.

15 Q. What kind of oven is this?

16 A. This one is a tunnel oven with bars inside.

17 Q. How long is this type of oven?

18 A. Between 25 and 50 meters. It's quite long of
19 the tunnel oven.

20 (Clarification requested by the Realtime Stenographer.)

21 Q. So we saw the blank come out, and what -- that's
22 after the heating; is that right?

23 A. After the heating, the blanks is transferred
24 into the press. You can see here the water cooling device
25 inside the dies of the press.

1 Q. What is happening at this point besides the
2 forming inside the press?

3 A. Inside the press, we make the part, and we made
4 the martensitic transformation.

5 Q. Is this also the quenching?

6 A. Yes. It's the quenching.

7 Q. Then we can continue the video.

8 A. But when we open the dies, then we have at the
9 end the part with a good shape.

10 Q. Thank you, Dr. Drillet.

11 So we can move to the next slide, number 17.

12 What are we seeing on this slide, Dr. Drillet,
13 slide 17?

14 A. On this slide, it's a summary of what I have
15 explained previously. You have on the left-hand side, you
16 have already seen this picture before. It was --
17 pre-coated Usibor with the steel coating. You can see that
18 during martenization and quenching, at the end we have the
19 coating of the top of the image on the right-hand side.
20 You can see that the coating microstructure is completely
21 different from the delivery one.

22 You can see also, that the microstructure of the
23 coating is completely different also once we are -- it's
24 martensitic steel microstructure.

25 Q. The image at the bottom, the martensitic steel,

1 is that the coating or is that something different?

2 A. It is a coating. So we have a part of the steel
3 below, but we much of this dimension is a cross-section is
4 the coating.

5 Q. The image in the lower right-hand corner, is
6 that the coating?

7 A. Yes.

8 Q. The image in the right-hand corner or lower?

9 A. No, the lower is martensite.

10 Q. Is that the steel or the coating, the
11 martensite?

12 A. The martensite, it's the steel.

13 Q. Now, you've been talking about how hot-stamping
14 has been around.

15 Did you invent hot-stamping?

16 A. No.

17 Q. Hot-stamping has been around.

18 Did you invent Usibor, the pre-coated steel?

19 A. No. Usibor, the pre-coated steel has been
20 invented by the team before me.

21 Q. You identified some problems from your patent.

22 What does this slide show, slide 18?

23 A. So concerning the thing we had to solve
24 particularly due to the fact that we have increased also
25 the number of hot-stampers involved in this process.

1 At the beginning, we had only one hot-stamper,
2 which for the original patent.

3 We have decided to increase this market. We
4 have to increase the number of hot-stampers involved in
5 this. So with different kinds of ovens, different kinds of
6 welds inside.

7 So the first thing we have to solve is
8 deposition, when you talk about that before, is the
9 deposition of liquid on the rolls, and you can see it here
10 on the scheme on the left-hand side.

11 Q. When does that liquid -- when does that problem
12 occur?

13 A. This liquid is coming from the coating during
14 the fast transformation. The problem is, as you can see
15 here, on the bottom left-hand side, excessive transfer of
16 liquid to the surface of the rolls. This one is --
17 (Clarification requested by the Realtime Stenographer.)

18 A. You can see here in the excessive transfer of
19 liquid at the surface of the coils.

20 Q. Excessive transfer of liquid to the surface of
21 the coils.

22 What about on the right side? What are we
23 seeing on the right side of the slide?

24 A. On the right side, it's another -- so this one
25 is an issue that we have at the hot-stamper. On the

1 right-hand side, it's an issue we have at the carmaker.
2 You can see here the influence of the top surface of the
3 coating. Because just the picture below, you can see the
4 rough surface, the smooth surface, with regard to the time
5 inside the oven of -- we could have different kind of
6 microstructure at the surface of the coating as well.

7 When the coating is too smooth, it is impossible
8 to get a good paintability. Then you observe that you have
9 completely by the scratch test, you can see that the paint
10 doesn't -- we have no adhesion of the paint on the smooth
11 surface, which is completely different when we take the
12 rough surface, when we succeed in getting this surface.

13 So what does it mean? It means that we have to
14 control the coating surface microstructure to ensure that
15 it is paintable, for example, for the carmaker.

16 Just an example of the influence of the
17 hot-stamping parameters on the final product.

18 Q. How did your patent resolve these problems?
19 What did you do to solve these problems?

20 A. What we have seen during the works made also in
21 our labs is that we have probably a harder microstructure
22 to control. This is the microstructure we have on
23 Figure 1.

24 What we have also -- this one is targeted
25 microstructure because for example, when we are talking

1 about paintability, we have seen that we have this kind of
2 layering, that if you are talking about the top layer on
3 Figure 1, we have to get this kind of top layer that has
4 good paintability.

5 So we have to find that we had to target
6 specific coating microstructure, this four-layer
7 microstructure, and we have also explained the way to
8 obtain this four-layer microstructure.

9 Q. Does that four-layer microstructure happen every
10 time Usibor is hot-stamped?

11 A. It's --

12 (Clarification requested by the Realtime Stenographer.)

13 Q. Do you get the four-layer structure every time
14 Usibor is hot-stamped?

15 A. No. Unfortunately not.

16 Q. So let's talk about your work to solve these
17 problems in the invention.

18 So who did you work with to do this? Who was
19 Ronald Kefferstein?

20 A. So Ronald Kefferstein was the person really in
21 charge of the relationship between the customer,
22 hot-stamper and the carmaker and the R&D, and the research.

23 Q. What about Dominique Spehner, your other
24 coinventor?

25 A. Dominique Spehner was involved in the quality

1 control of the coating at the exit of the aluminizing
2 plant.

3 Q. You and Mr. Kefferstein and Mr. Spehner, you had
4 the Usibor, and you had these problems. How did you --
5 what equipment did you use? How did you solve the problem?

6 A. As the main problem we had is the fact that
7 ArcelorMittal is not a hot-stamper. So we know that to
8 better understand what is happening, what is the influence
9 of the different parameters on the final result, we have to
10 invest in some simulators, hot-stamping simulators in order
11 to make our own trials.

12 Q. Are these computer simulators?

13 A. No. It is, you can see here, tool simulator.

14 Q. That's what's shown on slide 22, the simulator?

15 A. This one is historical simulator, and we have
16 much better simulators now, but what we can see here it was
17 quite simple, and we have an oven that makes austenization,
18 and we have some tools, water tools, but it was flat tools.
19 We made only blanks at that time.

20 You can see on the right-hand side, that it was
21 also manual transfer between the oven to the press. Here,
22 you have an idea of the size of the sample we have
23 provided.

24 Because what we have done during also all of
25 these years, we have produced a lot of blanks for a lot of

1 customers in order to have feedback in order to keep
2 them -- have them test our material. So we have
3 delivered -- we are still delivering these kind of samples.
4 We had right around -- between 2 and 3,000 blanks per year
5 to all of the hot-stampers or carmakers, mainly the
6 carmakers.

7 Q. So let's go to slide 23, and maybe you can --
8 what does this slide, slide 23, show?

9 A. This one, it's an example of the delivery we
10 have done to Honda in February of 2024.

11 Q. If we can go to slide 24, what are we seeing
12 here? What are these images?

13 A. We have sent two sets of material to Honda. The
14 first set of material of 1.5 millimeter is steel thickness.
15 Honda was mainly interested in spot weldability of our
16 material.

17 After our first delivery, Honda was very
18 satisfactory by the result. They obtained good spot
19 weldability. So they asked us to make an additional
20 delivery of 1.2 millimeter. Unfortunately, we don't
21 succeed in getting good weld range.

22 Q. Were these blanks that you sent, were they
23 commercial products for actual cars?

24 A. Sorry?

25 Q. Were the blanks that you sent, were they for

1 real cars; were they real parts?

2 A. No, no.

3 So on this kind of simulator, it is only for
4 prototype, or mainly to get the feedback of our customer.

5 Because we like to know the spot weldability,
6 the corrosion resistance, the small crash behavior.

7 Q. So if we go to slide 25, please. I think you
8 said the 1.5 millimeter blank worked well?

9 A. Yes.

10 Q. What about the 1.2 millimeter?

11 A. 1.2, we don't find any range of spot
12 weldability. We know that it's kind of -- this kind of
13 issue is mainly due to the surface. So we have made some
14 cross-sections. We have made some analysis of our lab in
15 order to understand the difference we have between the good
16 material, the bad material, and we have the bad material
17 that we had a quite disturbed surface of the coating. You
18 can see there on the left-hand side, we have quite a uneven
19 surface with a different kind coupon with a lot of porosity
20 also. So it is probably due to this very unstable surface
21 that we had.

22 Q. The part on the left side, was that Usibor that
23 was hot-stamped?

24 A. Yes.

25 Q. The left-hand side, was that a good or a bad

1 part?

2 A. The left-hand side --

3 Q. The left-hand side, is it a good part or a bad
4 part?

5 A. No, no. It's not a good part.

6 Q. But it was hot-stamped with Usibor?

7 A. Yes.

8 Q. So after you did this testing for the Honda
9 part, what did you do next?

10 A. What we have seen that because in that case, we
11 have had to change the steel thickness. We thought at the
12 beginning to have made the same trial at our lab.

13 So we had discovered that there is a very
14 sensitivity of the steel thickness on the final result, so
15 that means that there is probably a use sensitivity to the
16 heating rate, because of course, the heating rate inside
17 the oven is different from -- with regard to the steel
18 thickness. It is easier to heat 1.2 with regard to the 2
19 millimeters, for example.

20 Q. Let's go to slide 26.

21 Can you explain what you mean by the heating
22 rate.

23 JUDGE BHATTACHARYYA: Mr. Reiter, we should
24 break for lunch soon. If this is a good stopping place,
25 that is fine, or if you'd like to do a couple more slides,

1 that's also fine.

2 MR. REITER: We can break now.

3 JUDGE BHATTACHARYYA: Okay.

4 All right. We're on break for one hour.

5 (Whereupon, at 1:02 p.m., a lunch recess was
6 taken.)

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1 A F T E R N O O N S E S S I O N

2 (2:05 p.m.)

3 MR. REITER: Thank you, Your Honor. Ready to
4 proceed. I think it's on now. She's giving me a look. I
5 didn't even start my first question.

6 CONTINUED DIRECT EXAMINATION

7 BY MR. REITER:

8 Q. Welcome back, Dr. Drillet. Thank you.

9 So I think before the lunch break, we were up to
10 slide 26, and you had explained about the heating rate, and
11 how important that is.

12 Could you explain for the Court what we see on
13 slide 26, Dr. Drillet.

14 A. Yes, I could.

15 On the slide, you have a scheme of the curve in
16 orange, right. We have to try to follow during
17 austenitization particularly, during the fast
18 transformation of the coating because we have things as
19 soon as we make liquid, we have to ensure that the liquid
20 has been fully transformed to solid.

21 We follow the solid use of the system, the solid
22 use curve of the -- it was determined by the certain range
23 of the heating rate of the temperature.

24 (Clarification requested by the Realtime Stenographer.)

25 Q. Is the heating rate an important parameter in

1 developing the four-layer coating?

2 A. Yes.

3 It's key in this case, yes.

4 Q. So let's go to the next slide, slide 27.

5 And we have been talking about this coating, and
6 the layers. If you could step us through the layers,
7 starting, I guess, with the base steel, the steel
8 substrate, and work our way to the surface, Dr. Drillet.

9 What do we see on slide 27?

10 A. Well, on this slide, you have an illustration,
11 again, of the targeted microstructure we like to get for
12 the weldability, and we have seen this kind of
13 microstructure, particularly, the microstructure of the
14 coating of the surface, which is key.

15 We have seen that this microstructure, this
16 particular microstructure is suitable for all in-use
17 property of the carmaker. The weldability, the formability
18 and paintability and so on.

19 To determine -- because after that, we of course
20 we had to determine what kind of process parameter we have
21 to control because we have also process parameter at the
22 steel shop at the cold stamper.

23 If we made a full investigation around more than
24 one year in order to find the best -- the most important
25 parameter.

1 Q. How does one understand the different layers?
2 How did you discern between one layer and the next layer?

3 A. We can see here the targeted microstructure it's
4 a layer one separated into different layers. You can see
5 here, (a), (b), (c), and (d). This one is a scanning scope
6 picture, but of course, we have made some more deeper
7 analysis of this layer. This kind of picture is not enough
8 alone.

9 Q. Is the SEM enough to tell whether or not the
10 microstructure is the desired microstructure?

11 A. It gives us -- sorry, it gives us an idea of the
12 stratified microstructure, but it is not enough to have an
13 idea of the chemical composition of this layer.

14 Q. So you had mentioned that there are different
15 parameters that are important.

16 If we could go to slide 28, please.

17 Could you explain what those parameters are,
18 sir.

19 A. So on this slide, we have two kind of parameters
20 important to control.

21 The first one, the parameter to control at our
22 aluminizing plant at our delivery.

23 We have seen, for example, with the other case
24 that the coat -- the steel thickness is very important in
25 the final result. If we don't take into account the change

1 in steel thickness.

2 We have seen also concernings of pre-coating
3 that we have to -- steel pre-coated with a coating with a
4 very homogeneous thickness on both sides because the steel
5 is coated on both sides. It was the main challenge we had
6 at our aluminizing plant.

7 Now, concerning the hot-stamper. We have two
8 kind of parameters. The parameters of the oven, because
9 of -- of course, we have with regard to the hot-stamper, we
10 have different kind of oven. We could have tunnel oven as
11 we have seen on the movie before, but we could also have a
12 pizza oven. We can have a different type of oven, with of
13 course, different kinds of parameters with different kinds
14 of heating rate.

15 We have seen that two points inside this oven is
16 also very important for the result at the end.

17 The other important step with the quenching on
18 the dies. Of course, the transfer times has to be
19 controlled to ensure that we make all of the deformation in
20 the austenitic state to have a fully martensitic
21 microstructure.

22 The cooling rate is also important because if
23 the critical cooling rate is not high enough, there is a
24 risk to miss the fully martensitic fast transformation.

25 One thing to discover what is also in this

1 pattern, the effect of the deformation on the quickly
2 cooling rate.

3 Q. Dr. Drillet, there's a lot of parameters here.
4 How did you and your coinventors figure all of
5 this out?

6 A. We have -- make some common -- for example, the
7 critical cooling rate is inside the pattern, yes. It is an
8 important parameter, like the others.

9 Everything that is described in the patent.

10 Q. You had mentioned before the lunch break on the
11 simulator you have in your lab, you had made many thousand
12 of blanks?

13 A. Yes.

14 Q. A lot of trial and error?

15 A. Yes.

16 Q. So in this process, were you working with -- did
17 you teach the hot-stampers what you learned?

18 A. In Europe, it was a very, very important step at
19 the beginning of the story because at the starting point we
20 had only one hot-stamper, as I explained this morning. It
21 was Sofedit, it was quite easy to -- Sofedit is the name of
22 the company.

23 Q. Sofedit, S-O-F-E-D-I-T.

24 A. It was the hot-stamper. We had to make the
25 first part.

1 Of course, as we had to increase the market, we
2 had to increase the number of new incomer into the
3 hot-stamping of pre-coated because the hot-stamper is that
4 new. What was new was the hot-stamping of pre-coated
5 solution.

6 We had to make a lot of work with this new
7 incomer in order to teach them about a very important
8 parameter, which is the process window. The range of the
9 way to succeed a good part at the end.

10 Q. Let's turn to the next slide, slide 30, which is
11 CX-683C.

12 What is this document, Dr. Drillet?

13 A. This document is a very good example of that.
14 This one is not a Magna document. It is an ArcelorMittal
15 document.

16 Q. Who prepared this document?

17 A. This thing has been done by our team in our lab.

18 Q. At ArcelorMittal?

19 A. Of course. Of course.

20 For example, in the case of Magna -- Magna had a
21 part to test. It was for her prototype part in that case.
22 So we have given some advice to Magna to make its part --
23 their part. Magna sent us -- sent to Ronald Kefferstein
24 and was in direct contact with Magna.

25 Q. Sorry.

1 In the upper left-hand corner we see
2 Mr. Kefferstein's name; is that right?

3 A. Yes.

4 Q. Why is he on this document?

5 A. He's on the document because there is no --
6 there were no relationship -- direct relationship between
7 our lab and the customer.

8 All documents coming from R&D never goes to a
9 customer. It is the first time to take this document to
10 see if they could take some data to some advice to the
11 customer, but this kind of document has never been sent to
12 any customer, of course. It is an internal document.

13 Q. What was the problem that Magna was experiencing
14 with the process that you had told them?

15 A. The problem of Magna was quite different than
16 the problem of the number of layers, as we are talking
17 about up to the beginning. The problem of Magna was the
18 breakage they had on one part of their process. What we
19 have done, we have made first an analysis in our lab.

20 Q. What kind of part was it?

21 A. It was a B-Pillar.

22 Q. The B-Pillar, what was it made from?

23 A. The B-Pillar was made from Usibor aluminizing
24 coating with 1.6 millimeter in thickness.

25 Q. Did your lab do tests on the B-Pillar that you

1 received from Magna?

2 A. Yes.

3 We have made some analysis on this part. This
4 is a figure you know.

5 So what we have seen, we have seen that it is
6 not a problem of coating itself. While this coating, what
7 you have also seen it was very nice for us because Magna
8 has made a process with -- leading with the upper side of
9 our process window in terms of thickness, and because you
10 can see on this picture that alloying of this coating is
11 quite high. Due to that, we have determined the upper
12 limit of our process window.

13 But for Magna, it was not the issue of Magna.
14 So by discussing, by working with Magna, they said that
15 they should have probably an issue of dew point, a
16 regulation of the dew point inside the oven. So that
17 changed, we adapted, we make new trials with dew point.

18 Q. Were the new trails based on information that --

19 A. Yes.

20 Q. -- you provided to Magna?

21 A. Yes.

22 Based on our examination. But Magna has never
23 obtained this kind of result because for us it was not a
24 problem of coating. It was a problem of control of the
25 atmosphere.

1 Because the breakage we had was a problem of
2 delayed fracture due to hydrogen, is has nothing to do with
3 the coating.

4 Q. Delayed fracture due to hydrogen.

5 A. Delayed fracture due to hydrogen.

6 Q. Did this study and analysis that you did based
7 on the information that you had given to Magna, did that
8 inform you and your inventors about what to do?

9 A. It was interesting to complete our analysis we
10 had done previously because in that case, as Magna, as
11 tests -- high -- long time, for example, in that case, we
12 have taken this example as a parameter of the process
13 window.

14 Q. Just so the record is clear, Dr. Drillet, this
15 SEM image that we see on the screen, who prepared that SEM;
16 was it Magna or was it your lab?

17 A. No. It's our lab.

18 Q. What did you do with this SEM image? Did it --
19 what does it represent as far as your patent goes?

20 A. This image is an image we have decided to take
21 for the patent, for different kinds of reasons. For the
22 first one, we thought that it was the most easy picture to
23 understand what is the four layer.

24 On the second fact, it's that we have also taken
25 this picture to make a more deep analysis of each layer,

1 because, of course, it is easier to make an analysis of
2 each layer if the coating is at the upper limit, it's
3 thicker than for thinner materials in terms of coating.

4 Q. So after you did this analysis of the part you
5 received from Magna, what happened next?

6 A. After that, we are always convinced that we have
7 all data enough to try to patent our process window. The
8 way to get this four layers.

9 So due to that, we had a meeting with the patent
10 attorney at that time.

11 Q. So what do we see on slide 36, CX-893?

12 JUDGE BHATTACHARYYA: I believe there's an
13 objection. Can you hold it? There's an objection.

14 MR. ZHANG: Your Honor, I think -- so we
15 discussed this last night, and there's a shield and sword
16 issue here where the documents were redacted, and we were
17 not given the contents, the underlying contents under the
18 redactions.

19 So I think this testimony, if he's reading off
20 what's here, we're fine with it. But if he goes anywhere
21 beyond that, they could have waived the privilege
22 previously during fact discovery. They didn't. They made
23 that strategic decision not to. They should not be allowed
24 to do that here.

25 MR. REITER: Your Honor, we have no intention of

1 getting into the substance. This is just to corroborate
2 that there was activity that was going on towards the
3 patent. That's very apparent from the face of the
4 documents.

5 Dr. Drillet will testify to that.

6 But we're not getting into the substance. We're
7 not waiving privilege.

8 MR. ZHANG: Your Honor, the concern is we don't
9 even know what the meeting is about.

10 So he is adding additional information beyond
11 what's on the document by saying that it's part of him
12 trying to patent the invention. There's nothing there
13 about his invention, right.

14 So I think he is going beyond what is on the
15 document itself.

16 MR. REITER: Your Honor, I think they can argue
17 this in their post-hearing briefing, but if you look at the
18 cover of the patent, Oblon filed the patent. Oblon filed.
19 There is a series of documents that come next, e-mails and
20 so forth and bills that deal with this work.

21 It's just a corroboration of the activity that
22 was going on. It's the same exact type of information that
23 would be on a privilege log. It identifies that there were
24 communications between the client and the attorney, and
25 those communications were ongoing. They relate to the

1 patent. Dr. Drillet, Mr. Spehner, the other coinventor is
2 on this document, and we'll see other e-mails and other
3 documents with the other inventors without the substance.

4 So there's no waiver of privilege. There's no
5 sword/shield. This is very much just a corroboration of
6 the timeline that went from the conception, the final
7 puzzle piece, as we just saw, with that TAV document that
8 Dr. Drillet talked about until the filing of the patent.

9 MR. ZHANG: Well, Your Honor, you will see this
10 with the next five or ten slides, around there, that all of
11 the documents were redacted. There was no information that
12 we could gather from those documents other than the date
13 and the name.

14 So if they want to do that, that's fine, but
15 going beyond that to say, these documents relate to his
16 invention, and his trying to patent the invention, that's
17 not information we were privy to during fact discovery.
18 That's information they chose to withhold from us, and they
19 should not be adding it now.

20 MR. REITER: Your Honor, we --

21 JUDGE BHATTACHARYYA: Was there disclosure that
22 these documents related to his invention?

23 MR. REITER: I'm sorry, Your Honor.

24 JUDGE BHATTACHARYYA: Was there a disclosure
25 during discovery that these documents relate to his

1 asserted invention?

2 MR. REITER: We produced these documents, Your
3 Honor, during fact discovery.

4 Your Honor in fact had an order that allowed
5 them to redepose Dr. Drillet after the documents were --
6 the documents were produced the evening after he testified
7 in Brussels at his deposition.

8 They asked his coinventor, Mr. Kefferstein about
9 some of these documents, but Your Honor ruled that since
10 Mr. Kefferstein was not a corporate witness, not a 30(b)(6)
11 witness, they could have more time with Dr. Drillet. They
12 never followed up with that.

13 JUDGE BHATTACHARYYA: Okay.

14 MR. ZHANG: Your Honor, we didn't follow up
15 because we looked at the documents. They identified the
16 documents as supporting conception and reduction to
17 practice. We looked at them, and we decided that we didn't
18 need to because those documents do not corroborate their
19 alleged conception and order to reduction practice.

20 JUDGE BHATTACHARYYA: Understood. Let's take
21 just a short break. I'll be back with the guidance.

22 MR. REITER: Okay.

23 (A recess was taken at 2:25 p.m., after which
24 the hearing resumed at 2:26 p.m.)

25 JUDGE BHATTACHARYYA: I'm going to allow the

1 witness -- the questioning to go forward. The witness may
2 testify generally that these relate to his invention. I
3 understand there was an order allowing him to be deposed
4 further on documents that had been produced after his
5 deposition.

6 To the extent it goes into substantive content
7 or well beyond that, then Respondents can renew their
8 motion to strike.

9 MR. ZHANG: Thank you, Your Honor.

10 MR. REITER: All right. Thank you, Your Honor.

11 BY MR. REITER:

12 Q. You understand -- you were explaining? Okay.

13 MR. REITER: Just wanted to make sure he
14 understood what was going on.

15 JUDGE BHATTACHARYYA: I think you should be
16 careful in your questioning.

17 MR. REITER: Of course.

18 JUDGE BHATTACHARYYA: I don't want to take up
19 too much time on this, so we're going to go through the
20 questions. Respondents can seek to move to strike certain
21 testimony if it appears to go beyond what I've discussed.

22 MR. REITER: No. Totally understood, Your
23 Honor.

24 BY MR. REITER:

25 Q. Dr. Drillet, turning back to slide 36, and

1 CX-893C, who are the people that are identified on this
2 slide, just who are they?

3 A. So the people who are involved in this meeting
4 that was involved, Dominique Spehner and me, and our
5 internal lawyer, which is Dominique Kaplan, are the Oblon
6 lawyers.

7 Q. Let's go to the next slide, 37, please.

8 A. These are just the confirmation of the
9 application.

10 Q. Who is Mr. Treanor? Do you see that at the
11 bottom, who signed it?

12 A. An Oblon lawyer.

13 Q. Again, at the top, Mr. D. Kaplan, who is that?

14 A. Mr. Kaplan is our internal lawyer.

15 Q. Let's go to the next slide.

16 A. This one you just --

17 Q. 38. I'll ask the question, and -- he's prepped.
18 What is this document, Dr. Drillet, 38?

19 A. This document is an invoice coming from Oblon
20 for the work that was done in January 2006.

21 Q. Is it addressed to Dominique Kaplan?

22 A. Yes. Yes.

23 Q. Let's turn to the next slide, 39.

24 What is this document?

25 A. This document is an exchange with Oblon, also,

1 to our internal lawyers, Dominique Kaplan and to Sylvie
2 Floury and Sophie Plaisant.

3 Q. Who is Sylvie Floury?

4 A. Sylvie Floury and Sophie Plaisant are working
5 for us.

6 Q. And Sophie Plaisant?

7 A. Also?

8 Q. She is in the legal department?

9 A. Sophie Plaisant was manager of Dominique Kaplan.

10 Q. The next document, please.

11 What do we see on this document, slide 40?

12 A. Again, it's an invoice of Oblon with all of the
13 work made in March 2006.

14 Q. Let's go to the next document.

15 What is this document, Dr. Drillet?

16 A. This next document is just an exchange between
17 Dominique Kaplan and us on the patent project.

18 Q. The next document, slide 42.

19 So this is a little bit different, so can you
20 explain who Raisa Grigoræeva is.

21 A. Raisa Grigoræeva was with the company, but as a
22 trainer. She wasn't engaged at that time. She has made a
23 master in our lab on the fast transformation of the coating
24 during austenitization.

25 Q. What it -- I'm going to call her by her first

1 name. What did Raisa do for you?

2 A. Raisa helped us to build a more robust database
3 for, as I explained previously, we had to make a lot of
4 work at the lab scale to build some database to have a
5 better understanding on confirmation of the parameters of
6 the coating.

7 Q. Did Raisa contribute to the idea of the
8 invention?

9 A. No. Not to the idea.

10 Q. Let's turn to the next slide, 43, please.

11 What is this document?

12 A. This document is again a document, which in that
13 case between Dominique Kaplan and Dominique Spehner about
14 the precision concerning the patenting.

15 Q. The next slide, 44?

16 A. The slide is coming from Oblon to tell us that
17 the draft is finished.

18 Q. The date of this e-mail is October 20, 2006?

19 A. Yes.

20 Q. The next slide, what do we see here?

21 A. Here, it's the date of the filing patent
22 application.

23 Q. The original patent was filed October 30, 2006?

24 A. It's -- yes.

25 Q. October 30?

1 A. Yes.

2 Q. Okay. Thank you.

3 Now, let's -- new subject. We're done with
4 that. Let's talk about your patents just a little bit. In
5 your own words, Dr. Drillet, what's your invention?

6 A. Our invention, so -- this invention has two
7 parts. The first one is the determination of a targeted
8 coating microstructure. It's what I have explained a lot
9 of time, is four-layer microstructure, but four-layer
10 microstructure is not enough.

11 We have also of course to describe how to get
12 this microstructure.

13 So the reason why in this patent we have a lot
14 of details about the kinetic of the heating rate, about the
15 effect of the deformation on the -- on the critical cooling
16 speed.

17 Q. So does your patent disclose all of the
18 different features of the coating and the parameters needed
19 to obtain the coating?

20 A. Yes.

21 Q. What do we see on this slide, 48?

22 A. Here, it is a different extract, description of
23 the way to get -- for example, here, we have two kinds of
24 things here.

25 The way to get good properties at the process

1 window on the way to get the good properties at carmaker.

2 For example, if you look at the pre-coating
3 thickness, we have seen that a good control of the
4 pre-coating delivery, particularly in terms of the
5 homogeneity --

6 (Clarification requested by the Realtime Stenographer.)

7 A. You have to avoid any high disruption in the
8 thickness of the coating.

9 We have -- see that it is very important to
10 avoid, for example, liquid deposition. We can understand
11 that if you have an extra coating thickness on one side of
12 the blank, with regard to the other side, we will have, of
13 course, extra deposition of the liquid phase, in other
14 words, on the extra side coating.

15 We have also discussed about heating rate. The
16 heating rate is -- I've already discussed about that
17 before.

18 Q. Let's pause.

19 A. Yes.

20 Q. Let's talk a little bit about the claims just
21 very briefly.

22 So I've put on the slide, slide 49, Claim 1 of
23 the '602 patent, and I want to walk through that just
24 briefly.

25 I've got the preamble highlighted.

1 "Pre-coated steel product," what is that
2 referring to, Dr. Drillet?

3 A. What is important to -- in this Claim 1 is
4 highlighted in yellow here. It's a fact that at first,
5 that the resulting coating is coming from interdiffusion
6 reaction between the base steel and the aluminum, or the
7 aluminum alloy on the coating. So that means that it's
8 directly related to process parameters, because this
9 diffusion between the base steel and the aluminum is done
10 by the hot-stamper.

11 Q. In the middle there, in the second paragraph,
12 second full paragraph, I think you're talking about the
13 coating results from interdiffusion; is that what you're
14 referring to?

15 A. Yes.

16 Q. What is interdiffusion? I think we have a
17 graphic for that.

18 A. Interdiffusion, so it is an important reaction
19 between the steel and the coating inside the oven.

20 We have two kinds of effects of diffusion. We
21 have a diffusion of iron from the steel into the coating,
22 and we have diffusion of aluminum from the coating to the
23 steel side. Due to this reaction, we promote the
24 interdiffusion layer, which is written here.

25 What is also important to see on this picture

1 that, of course, this outer diffusion layer has a gradient
2 of composition inside. We have a higher composition of
3 iron from the side in contact with the steel. We have a
4 higher concentration of aluminum in the opposite side of
5 this intermediate layer.

6 Q. Did the iron and the aluminum have the same
7 kinetics when they diffuse?

8 A. No, no, no, no, no.

9 Q. Does that affect the type of four-layer coating
10 you may later get?

11 A. So kinetic -- the difference of kinetic or
12 diffusion between the iron and the aluminum doesn't affect
13 the outer diffusion layer itself.

14 Q. Does it affect the interdiffusion layer and
15 create a gradient?

16 A. It affects the gradient, yes, of course.

17 Q. So going across the interdiffusion layer, the
18 first layer closest to the base steel, is that homogenous
19 in that layer?

20 A. No, in that case, we have -- when we are talking
21 about homogeneity, we have two kinds of things.
22 Homogeneity in terms of thickness and homogeneity in terms
23 of composition.

24 What I could say concerning the composition, if
25 your question is about composition, of course, the outer

1 diffusion layer is not homogeneous.

2 Q. Let's go to the next slide, 51.

3 This is Figure 1 from the patent.

4 What is this showing, Dr. Drillet?

5 A. This figure shows the layered microstructure of
6 the coating we have target -- targeted, sorry, with the
7 different layers, (a), (b), (c), and (d), which has their
8 own composition.

9 Q. When you say "their own composition," on the
10 slide it says, composition of iron or aluminum; is that
11 significant?

12 A. Concerning the -- I should say, concerning the
13 layer (a), as I explained previously, we have a gradient of
14 composition, so this one is particular, but for the rest of
15 the layers, the (b), (c), and (d), we have the mean
16 composition inside each layer.

17 Q. So if we could -- I think we've talked about
18 this already, slide 52, you mention a gradient at the
19 interdiffusion layer; is that correct?

20 A. No, but that case...

21 Q. This is --

22 A. As I explained, this layer is not homogenous in
23 that case. We have a gradient inside.

24 Q. Let's talk about the surface of the steel, the
25 coated steel, after the hot-stamping.

1 So does the layer at the surface have to be
2 entirely continuous?

3 A. Concerning the continuity or the homogeneity of
4 the top layer, if you are talking about the top layer, the
5 extreme surface of the coating, what we have put in the
6 patent is we accept a 10 percent of -- discontinuity of 10
7 percent of another compound.

8 For example, on this picture, you can see that
9 sometimes the layer which is just below the upper layer
10 could go to the upper surface.

11 Q. Does your patent explain --

12 A. Yes.

13 Q. -- this?

14 A. Yes. So it is described in the patent. And we
15 have seen that up to 10 percent of this heterogeneity, I
16 should say, has no impact on the final properties.

17 That's the reason why it is not continuous,
18 fully continuous, but it is -- when we talk continuous, it
19 is continuous in the description -- in the definition of
20 our patent with 10 percent of exigent phases at the
21 surface.

22 Q. After the patent, after your discovery of the
23 significance of the four layers, and the process parameters
24 by which one could reliably get those, what happened to the
25 sales of Usibor?

1 A. By communication of -- it helped us to define a
2 robust way to get a good material, we have observed a very
3 great extent application of this product on the automotive
4 market.

5 So we had a huge increase involvement of the PHS
6 on body-in-white.

7 MR. REITER: Thank you, Your Honor. I pass the
8 witness.

9 JUDGE BHATTACHARYYA: Thank you.

10 MR. REITER: Thank you, Dr. Drillet.

11 MR. ZHANG: Good afternoon, Your Honor. Linhong
12 Zhang for the Respondents.

13 May I proceed?

14 JUDGE BHATTACHARYYA: Yes. Please go ahead.

15 CROSS-EXAMINATION

16 BY MR. ZHANG:

17 Q. Good afternoon, Dr. Drillet. It's nice to meet
18 you.

19 Now, you started by talking about the original
20 Usibor patents.

21 Do you recall that?

22 A. Yes.

23 Q. I believe that is slide 6 in your
24 demonstratives?

25 Mr. Sayer, could I have slide 6.

1 A. Just this one. Okay.

2 Q. Specifically, you're talking about the '805
3 patent; is that right?

4 A. Yes, it is. This one is the first -- it's the
5 patent of 2001, yes. It's about 2001. Yeah.

6 Q. This is the original Usibor patent; correct?

7 A. Yes.

8 Q. You're not an inventor on this patent; correct?

9 A. I'm not an inventor of this patent.

10 Q. One of the inventors is J.P. Laurent; correct?

11 A. J.P. Laurent, yes.

12 Q. The only thing you can tell me about
13 J.P. Laurent is that he was an inventor on this patent;
14 correct?

15 A. Sorry?

16 Q. The only thing that you can tell me about
17 J.P. Laurent is that he's an inventor on this patent?

18 A. Yes, yes.

19 Q. So you didn't work with Mr. Laurent, did you?

20 A. No, because I enter -- as I explained this
21 morning, I enter in this topic in beginning -- probably
22 beginning 2004, and no, I had no -- never worked with
23 J.P. Laurent at that time.

24 Dominique Spehner is a coinventor of this
25 patent, he worked with Jean-Pierre Laurent.

1 Q. You testified that you were brought in to work
2 on increasing the sales of Usibor; correct?

3 A. Yes.

4 Q. So fair to say Usibor was already on sale by the
5 time you started working on Usibor; correct?

6 A. Of course. Yes. Correct.

7 Q. Of course, Usibor -- well, let me step back.

8 Of course, AM was making tons and tons of Usibor
9 between the time it was on sale, and when you got started
10 working with Usibor; correct?

11 A. Tons and tons, I'm not sure, sir. I'm not -- we
12 had -- as I explained, between 2001, 2002, 2003,
13 unfortunately for us, the volume was not so high.

14 As I explained, we were mainly focused on bumper
15 beam. Concerning the bumper beam, it was a completely
16 different story, because the bumper beam protected against
17 corrosion, for example. So the coating -- had to be
18 accepted to the fact that the coating has to prevent
19 oxidation of the steel during austenitization. The coating
20 was -- for example, the bumper beam has not to be spot weld
21 also. So at that time, it was only a problem of steel we
22 had during all these years.

23 We had made a lot of study to ensure that with
24 this new solution, because it was quite new at that time to
25 have a pre-coated solution, to ensure that in terms of

1 crush, in terms of density properties, and so on, the
2 material is okay, but I should not say that we had a lot of
3 volumes at that time.

4 Q. Fair to say, Usibor was on sale between 2001 and
5 2006; correct?

6 A. Yes.

7 Q. When Usibor was sold, it was sold to
8 hot-stampers; correct?

9 A. Of course.

10 Q. Hot-stampers, they would be hot-stamping the
11 Usibor that they received; correct?

12 A. Yes.

13 Q. You'd agree with me that each hot-stamper would
14 have their own processing parameters; correct?

15 A. Yes.

16 Q. Their processing parameters for each
17 hot-stamper, they would differ from each other; correct?

18 A. Each hot-stamper has their own practice, if that
19 is your question, yes.

20 Q. Now, you testified that the four-layer structure
21 in the '602 and '277 patents could be created before your
22 patents; correct?

23 A. It's a question if -- is there any chance to
24 observe the four-layer before the patent, my answer should
25 be yes, yes.

1 Q. What that means is that the hot-stampers that
2 bought the Usibor before your patents, they could create
3 the four-layer structure; correct?

4 A. They could -- if you want to create something,
5 it's a means that you target something.

6 At that time, nobody targeted any coating
7 microstructure. So it is -- when we like to create
8 something, you create something to get a target.

9 If the hot-stamper could have, by chance, four
10 layer, yes, it is physics.

11 Q. So the hot-stampers did create the -- let me
12 step back and rephrase.

13 So the hot-stampers that purchased Usibor before
14 your patent, did create the four-layer structure; correct?

15 A. To be honest, the coating was not our focus.
16 I -- we have not a lot of pictures focused on the coating.

17 So it is impossible for me to say to you that
18 they never made four layer, but I have -- it was not our
19 focus at that time.

20 The microstructure was the coating element. The
21 microstructure of the coating was a focus. As soon as we
22 had issue, which as I explained with the possibility of
23 painting and so on.

24 But at the beginning, I have -- I don't
25 remember, to be a paper dedicated to the description of

1 each layer on -- particularly of the four layers.

2 Q. Sir, I'm going to try it one more time. I don't
3 think you focused on my question, so I'm going to ask it
4 one more time.

5 The four-layer structure could be created
6 through hot-stamping before the filing of the '602 and '227
7 patents; correct?

8 A. I have already answered your question, yes, it
9 could happen. It was not done on purpose.

10 Q. Dr. Drillet, do you remember having your
11 deposition taken in this investigation?

12 (The Witness consulted with the Interpreter.)

13 A. I don't, no, no. I have never testified, no,
14 never.

15 Q. Do you remember having your deposition taken in
16 this investigation?

17 A. In the Brussels, yes. My first deposition was
18 in Brussels.

19 Q. Mr. Sayer, could I have Dr. Drillet's transcript
20 at page 109, lines 22 to page 110 at line 3.

21 "Question: Hot-stamping aluminum-coated steel
22 could create four layers in the coating before you filed
23 your patent; correct?

24 Answer: Yes."

25 A. Yes, it could, yes. I said the same thing,

1 yeah.

2 Q. Now, you'd agree with me that the four-layer
3 structure is not your invention; correct?

4 A. The four layer is not our invention, no. Our
5 invention is -- we have -- the invention is not natural.
6 Our invention, the patent is the -- the fact that you have
7 decided to target this four layer because -- not to get to
8 targets a four layer, like this sometimes, it's alive.

9 What we have in this invention, we had to -- we
10 had to get this four layer, the first thing.

11 The second one is also to get this four layer
12 you have to make -- to control some parameters on the way
13 we have described in the patent. But the difference is
14 that we would like to obtain these four layers, and always,
15 in a robust manner, not sometimes like this.

16 Q. So if I understand your testimony, sir, the
17 invention is how you generate the four layers; correct?

18 A. The invention, yes, it's about -- we claim is a
19 four layer.

20 Q. Sir, the invention -- your invention is how you
21 generate the four layers; correct?

22 A. How we generate, yes, yes, sir. I would say
23 that.

24 Q. And the invention is defining a process in a
25 repeatable, robust way to generate the four layers;

1 correct?

2 A. Yes.

3 Q. And therefore, you cannot disassociate the four
4 layers from the process by which you get the four layers;
5 correct?

6 (Clarification requested by the Realtime Stenographer.)

7 Q. You cannot disassociate the four layers from the
8 process by which you get the four layers; correct?

9 A. Yes.

10 Q. The key parameter for creating the four layers
11 is the heating rate; correct?

12 A. Are you asking me, yes.

13 As I described, we have different kinds of
14 parameters, but the key parameter is the heating rate, yes.

15 Q. The heating rate is controlled by modifying the
16 temperature; correct?

17 A. Is -- sorry?

18 Q. Is controlled by modifying the temperature;
19 right?

20 A. Yes.

21 It's to control -- yes, to -- the heating -- the
22 heating and to modify the temperature. For example, if you
23 have a tunnel oven, to modify the temperature in each zone,
24 the different zones of the tunnel oven.

25 Q. Sir, I will get there, but could you just focus

1 on answering my question, please.

2 So the heating rate also depends on the
3 thickness of the steel; correct?

4 A. No. No -- it depends -- yes, it depends on the
5 steel thickness, but depends also of the heating curve
6 inside the oven.

7 So you could heat it -- what I explained
8 previously, by putting different temperatures in different
9 zones of the oven, for example.

10 In that case, it doesn't depend to the steel
11 thickness. It's a combination.

12 Q. The heating rate depends on the thickness of the
13 steel; correct?

14 A. Sorry?

15 Q. The thickness of --

16 (The Witness consulted with the Interpreter.)

17 A. Yes, but not alone.

18 Q. I'm sorry, did you say "yes"?

19 A. Yeah. I said -- if you are talking about the
20 hot-stamper process, the heating rate depends, of course,
21 on the steel thickness, but it depends also on the oven of
22 the hot-stamper. The choice of the technology of the
23 hot-stamper.

24 It's not so simple that we have -- of course, if
25 you are heating a steel of 2 millimeter in thickness, it

1 will -- the heating rate would be lower than 1 millimeter,
2 but what we have is -- work with the hot-stamper is try to
3 lower this difference.

4 Q. So, Dr. Drillet, I'm going to ask you to just
5 answer my question. You're getting to my next question. I
6 will -- and you could explore, if you want, my questions
7 with your counsel on redirect.

8 So the heating rate also depends on the heating
9 technology used in the furnace; correct?

10 A. Yes.

11 Q. And it depends on the furnace; correct?

12 A. I'm sorry?

13 Q. The furnace.

14 (The Witness consulted with the Interpreter.)

15 A. Yes.

16 It depends on the technology used by the heating
17 rate, and the lab oven has nothing to do with the heating
18 rate in the initial oven, even if we are working on the
19 same steel thickness.

20 Q. Now, Mr. Sayer, could we have demonstrative 49
21 from Dr. Drillet.

22 Now, Dr. Drillet, these -- your demonstrative
23 49, you have Claim 1 of the '602 patent; correct?

24 A. Yes. It's Claim 1, yes.

25 Q. You'd agree with me there's nothing in Claim 1

1 about heating rate; correct?

2 A. Concerning the Claim 1, there is nothing clearly
3 about each parameter. When we have written that the
4 coating result for the interdiffusion between the steel
5 aluminum base coating, that means, of course, it depends on
6 the process of the diffusion of the formation of this
7 phase.

8 So that means that this formation of this
9 coating is the result of interdiffusion, so it is a result
10 of the process.

11 Q. You're not claiming how to get -- you're not
12 claiming the process as to how to get to the four-layer
13 structure; correct?

14 A. We have claimed that it is important to the
15 process due to the fact that it is an important for the
16 diffusion reaction.

17 So the process is behind this sentence.

18 Q. Now, Dr. Drillet, you also testified about
19 Figure 1 of the patent; correct?

20 A. 1, yes.

21 Q. Specifically, I think you show it on your
22 demonstratives, 35.

23 A. Okay.

24 Q. The four-layer structure is shown in Figure 1 of
25 the patent; correct?

1 A. Yes.

2 Q. I think on your demonstrative 35, you also have
3 what's the TAV analysis on the left-hand side, the image
4 from the TAV analysis; correct?

5 A. Yes.

6 It is Magna TAV, yes.

7 Q. You testified that it was ArcelorMittal that
8 took the image, that image; correct?

9 A. Yes.

10 Q. But you'd agree with me it was Magna that
11 performed the hot-stamping; correct?

12 A. Magna has performed this part on the advice at
13 that time. Yes, it is a Magna part. It's not an accurate
14 part.

15 Q. The four-layer structure is found on the Magna
16 part; right?

17 A. Yes.

18 Q. It's found on the B-Pillar that Magna sent you;
19 right?

20 A. Yes.

21 Q. And Magna was the one that took Usibor 1500, and
22 placed it in the oven; correct?

23 A. Yes.

24 Q. Magna was the one that fired up the oven to a
25 certain temperature?

1 A. Magna -- before making this part, we had given
2 some process window to Magna. The process window, what I'm
3 talking about since the beginning, it's a sort of guideline
4 we have given to a lot of hot-stampers in order to succeed
5 in this microstructure.

6 So Magna has made this part under our advice,
7 yes.

8 Q. Magna set the temperature for the oven; correct?

9 A. Set the temperature for --

10 Q. Temperature.

11 A. Yes.

12 Q. It was Magna.

13 And Magna was the one that decided how long to
14 keep the blank in the oven; correct?

15 A. Magna -- so it is -- the reason why Magna asked
16 us for technical support because they don't respect
17 completely our advices, particularly, concerning the time
18 inside the oven, and also the point. But the reason why --
19 but all this -- this part, it's the question, if this part
20 has been processed with the internal parameters of Magna,
21 or if this part has been processed with the process window
22 given by ArcelorMittal.

23 My answer is that Magna at that time has made
24 this part under the process window given by us.

25 And we have never given this stuff to Magna.

1 Q. So Magna stamped the heated part; correct?

2 A. Yes, yes.

3 Q. Magna sent the heated part back to you; correct?

4 A. Yes.

5 Q. Now, I understand your suggestion that the --
6 you told Magna how to stamp the part.

7 That's your testimony, sir?

8 A. (Nods head up and down.)

9 Q. But you'd agree with me that the TAV request is
10 a customer request; correct?

11 A. The customer request is technical support, but
12 this kind of document, we have made a lot of documents like
13 this with different kinds of customers.

14 This kind of document is an internal document
15 for R&D. We never give this document to any customer.
16 Usually, this document is for -- in that case, it is Ronald
17 Kefferstein who was in direct contact with the customer.
18 Ronald has to discuss with us the best way to help our
19 customer, not to distribute this kind of paper.

20 In that case, as was explained, it was not a
21 problem of coating. So we are no -- we have no reason to
22 give this picture to Magna, because Magna has an issue of
23 delayed fracture due to hydrogen.

24 Due to that, we know that usually when we have
25 this kind of issue at hot-stamper, it is a combination of

1 two parameters. Probably a too long time inside the oven,
2 it's the reason why they have obtained something at the
3 upper limit of our process window, but plus, too high dew
4 point inside the oven.

5 So it was the case at Magna. So we had just
6 asked Magna to check the --

7 Q. You'd agree that for the B-Pillar that's at
8 issue in this TAV request, Magna was stamping Usibor 1500
9 for Ford; correct?

10 A. Yes.

11 Q. This TAV request -- let's bring up Dr. Drillet's
12 demonstrative at slide 30.

13 Do you see that this TAV request is dated
14 November 25, 2005; correct?

15 A. Yes.

16 Q. That's before December 2005; right?

17 A. It is, just before.

18 Q. That means Magna was performing hot-stamping in
19 November -- at least in November 2005; correct?

20 A. Yes.

21 Q. And Magna was able to get -- sorry.

22 Magna was able to generate the four-layer
23 structure claimed in your patents as of November 2005;
24 correct?

25 A. No. As I explained, in order to perform good

1 parts, we have never discussed at that time without any
2 customer of the targeted coating microstructure to get.

3 What we have done is we have discussed about,
4 for example, weldability issues, so we have discussed about
5 homogeneity of the extreme surface in the case of Honda
6 without talking about the fact that this kind of good
7 microstructure at the surface is given by the four layer,
8 and we have never told about that.

9 So usually, what we have done, when I talk about
10 process window, we have given some guideline in terms of
11 temperature inside the oven, inside the -- it was also --
12 it was also for --

13 Q. I'm going to ask my question again, sir.

14 Magna was able to create the claimed four-layer
15 structure before December 2005; correct?

16 A. Yes.

17 Q. Now --

18 A. But Magna doesn't know that, because Magna was
19 not equipped to make analysis of the -- so the analysis has
20 been done in our lab.

21 This picture of the four layer has never been
22 shared with Magna. So Magna was able to do that, yes, but
23 that's it.

24 Q. So, sir, if I understand your testimony, you're
25 saying Magna created the part, and you took the picture;

1 correct?

2 A. Yes.

3 Q. Now, the TAV request that you see here, TAV is
4 an acronym for after-sale service; correct, sir?

5 A. Yes.

6 Q. You were performing after-sale service for Magna
7 to promote the sale of Usibor; correct?

8 A. Yes.

9 Q. I want to highlight the top middle, the 64/05 on
10 top.

11 A. Yes. It's an internal reference of -- it's a
12 number of -- for example, it's a number of TAVs we have
13 done in 2005. 64.

14 Q. So, sir, let me ask my question. This TAV
15 request is the 64th TAV request made in 2005; correct?

16 A. Yes.

17 Q. That means there were 63 other TAV requests that
18 were made before this November 25, 2005; correct?

19 A. Of course. We have -- yeah.

20 Q. So 63 other instances of someone who bought
21 Usibor and hot-stamped Usibor; correct?

22 A. No, no. It's not correct.

23 Because this -- this number is not the number of
24 hot-stamping -- what is the TAV? The TAV is after-sales,
25 as you said, but not only for PHS. So this one is done by

1 a team dedicated to metallurgical exercise. It has not
2 been done in my team, for example.

3 In the 65, I don't know exactly the number of
4 issues coming from PHS at that time, but we could have call
5 of the PhDs and so on. This one is an internal number of
6 the department dealing with expertises. It is not the
7 number of PHS analysis.

8 (Clarification requested by the Realtime Stenographer.)

9 A. Of press-hardened steel issue, I don't -- to be
10 honest, I don't remember the number of TAVs dedicated to
11 PHS in 2005.

12 Q. Now, for this TAV request, you did not work on
13 investigating the issues shown in this TAV request;
14 correct?

15 A. Sorry.

16 Q. You did not work on investigating the issues
17 shown in this TAV request; correct?

18 (The Witness consulted with the Interpreter.)

19 A. No, it is -- it is the same lab. In the same
20 lab, each work is divided into different teams.

21 So in that case, I have not made -- the TAV work
22 was not made by my team. It has been done by a
23 metallurgical team, which is working for us, because if you
24 look at the diffusion of the result, the main diffusion of
25 result was, when it is for PHS, it is -- the diffusion was

1 on Ronald and me. The rest of the people are people of the
2 lab, and of course, it depends of the issue for PHS that
3 had done the job for us.

4 Q. I apologize. Part of it is I just cannot fully
5 comprehend what you're saying, and I apologize about that,
6 so I'm going to reask my question.

7 You did not work on investigating the issues
8 shown in the Magna TAV request; correct?

9 (The Witness consulted with the Interpreter.)

10 A. Okay. I try to be more clear.

11 So the PHS team is made, as explained, by R&D
12 team, the customer team on plant quality.

13 In that case, when we had the issue coming from
14 a customer, it is the customer team, which is represented
15 by Ronald Kefferstein. Of course, I know because I am also
16 one of the owners of this result.

17 But what I explained is in our lab organization
18 at that time, we had a team dedicated to development, and a
19 team dedicated to any expertises coming from the customer.

20 The people who were making their expertise are
21 coming from another team, but we are all in the same team
22 so it is no problem about that.

23 Q. Mr. Sayer, could I have Dr. Drillet's testimony
24 at page 105, lines 22 to 24.

25 So, "Question: Did you work on investigating

1 the issue that is shown in Exhibit 5?

2 Answer: No."

3 A. Yeah.

4 Q. That was your testimony; correct, sir?

5 A. Yes, correct. It is this metallurgical team.

6 Q. You understand Exhibit 5 from your deposition is
7 this TAV request; is that right?

8 (The Witness consulted with the Interpreter.)

9 A. Yes, yes, yes.

10 I have not made the analysis, if that is your
11 question. We have a team dedicated to that who have made
12 the analysis. So, yeah, it is the answer I have. Perhaps
13 it's not clear, but it is how we are organized.

14 Q. For hot-stamped parts that are created by
15 hot-stampers, you only find out about the parameters when
16 there's an issue; correct?

17 A. Concerning this TAV?

18 Q. I'm sorry?

19 (The Witness consulted with the Interpreter.)

20 A. Yes, yes. Okay.

21 It is key, what you are asking. Usually, when
22 everything is going well, we never receive anything from
23 our customers.

24 Usually -- and it is also very difficult to --
25 it was also -- one key of our work was we have made a lot

1 of work in order to convince the hot-stamper that it could
2 be interesting for them -- for us, sorry, to get -- to have
3 information concerning their parameters, because usually,
4 hot stampers parameters are quite confidential.

5 As ArcelorMittal is working with all
6 hot-stampers, we had some issues, right, to get data coming
7 from one hot-stamper, they could think that we could
8 discuss with another.

9 So usually, only -- we obtain sometimes
10 parameters when we have issues, that's right.

11 Q. In fact, there are many parts, even production
12 parts, that you do not know the hot-stamping parameters
13 for; correct?

14 A. Yes, yes.

15 Q. All right. I want to move on to one last thing
16 really quick.

17 Mr. Sayer, could I have slide 42.

18 Dr. Drillet, I think I heard in your testimony
19 that you testified that Ms. Raisa was a trainer.

20 Did I have that right?

21 A. Yes. That's right.

22 Q. What you mean by that was that she was an
23 intern; correct?

24 (The Witness consulted with the Interpreter.)

25 A. Yes.

1 Q. Her internship at ArcelorMittal started on March
2 1, 2006; correct?

3 (The Witness consulted with the Interpreter.)

4 A. In March, yes. The 1st of March, 2006.

5 Q. And it ended on August 31, 2006; correct?

6 A. In August, yes, she finished, that closes her
7 internship, yes.

8 MR. ZHANG: I'll pass the witness, Your Honor.

9 JUDGE BHATTACHARYYA: Thank you.

10 MR. REITER: Just a few additional questions,
11 Your Honor.

12 REDIRECT EXAMINATION

13 BY MR. REITER:

14 Q. Dr. Drillet, I just have a few additional
15 questions to follow up on some of the things you just
16 discussed.

17 If we could put up slide 29, please, from our
18 deck.

19 Dr. Drillet, we talked about this, I think,
20 before the lunch break. Were you and your team teaching
21 the hot-stampers what to do in the 2005 time period?

22 A. Yes.

23 Q. Is that what you did with Magna?

24 MR. ZHANG: Objection, Your Honor. Leading.

25 JUDGE BHATTACHARYYA: Respond.

1 MR. REITER: "Is that what you did with Magna?"

2 I don't think that's a leading question.

3 MR. ZHANG: It's suggesting an answer.

4 JUDGE BHATTACHARYYA: The objection is
5 overruled.

6 MR. REITER: Okay. I'm sorry?

7 JUDGE BHATTACHARYYA: The objection is
8 overruled.

9 You may proceed.

10 BY MR. REITER:

11 Q. Is that what you did with Magna?

12 A. What I have explained, what I have explained is
13 we have given some advice to Magna. Yes, it is what I
14 discussed.

15 Advice, when I talk about advice, we have to
16 talk about process window with them to try to respect.

17 Q. You were asked some questions about the TAV
18 document that we were looking at, if we could skip a couple
19 of slides forward just to have it. There we go.

20 Slide 30 of our presentation, CX-683.

21 Now, you were asked about whether or not you
22 were involved in this investigation.

23 What did you mean by that? Did you do the
24 testing itself?

25 A. Ronald Kefferstein was working in direct contact

1 with the hot-stamper. So we had some trials at Magna, and
2 Ronald went and visited Magna. Magna tells him that we
3 have made some parts, B-Pillar under our process window,
4 and unfortunately, we have a break -- breakage of the
5 lower -- upper part of the B-Pillar.

6 What I tell to Magna that, send us your part.

7 Q. Who actually did the SEM image in this analysis?

8 A. It was the metallurgical team I am talking about
9 before.

10 Q. Did you receive this report?

11 A. Yes.

12 Q. Did you study it?

13 A. I received. Yes, I have studied this report.

14 Q. Did this report influence your invention?

15 A. This report was important for us because we
16 have, for the first time, the upper limit of our process
17 window. It sort of is the last part of a puzzle because
18 the process window is quite difficult to define because we
19 have to find the lower limit, the upper limit, the main
20 range, and so on.

21 Due to that, we had gotten the last part of the
22 puzzle, which there is the upper limit, which is at the
23 boundary, in that case.

24 So due to that, we have discussed internally
25 with Ronald and with Dominique to say that now we have all

1 of the parts of this puzzle.

2 So perhaps it's time to protect something.

3 Q. Let's skip back to when you first started this
4 project, I think you said late 2003 and early 2004; is that
5 right?

6 A. Early 2004, yeah.

7 Q. There's been testimony, and you confirmed that
8 Usibor before 2004 when you started, had been an sale; is
9 that right?

10 A. Very small volumes.

11 I explained with part of this bumper beam. You
12 can imagine that the bumper beam has nothing with the
13 body-in-white, as I described previously. So it is
14 unnecessary to spot-weld this part on the body-in-white.
15 We just weld, but another way, the crush box on this.

16 At that time also, it is also the case, most of
17 the bumper beam are not coated because the protection
18 against corrosion is not necessary. So we have a lot of --
19 at that time we have a lot of explanation why we were not
20 dedicated to the coating. We were most dedicated to the
21 fact that we should get 1000 MPa on all of the parts, even
22 with the pre-coated solution.

23 Q. When you started your work, did you look at
24 those bumper beams and analyze them to understand what the
25 project was?

1 A. No, no.

2 The only thing we had made it's the tensile
3 properties to see if you are in a good -- if you were so in
4 a good range of tensile property, but that's it.

5 We have never conducted such a detailed TAV at
6 that time on this kind of part.

7 Q. We've talked a lot about this -- this morning,
8 but every time that Usibor 1500 is hot-stamped, every time,
9 is it possible to always get the four layers?

10 A. No.

11 Of course, it should be very easy for us, if it
12 has likely -- so we don't have to spend so many euros to
13 define the parameters.

14 Q. So the answer is no?

15 A. No. Of course not.

16 MR. REITER: No further questions, Your Honor.

17 JUDGE BHATTACHARYYA: Thank you.

18 MR. ZHANG: No further questions.

19 JUDGE BHATTACHARYYA: All right.

20 Thank you, Dr. Drillet. You may step down.

21 (Witness excused.)

22 MR. REITER: Your Honor, do you want the next
23 witness now or do you want --

24 JUDGE BHATTACHARYYA: Yeah. Let's go ahead with
25 the next witness.

1 (PAUSE in the proceedings.)

2 MR. SCHARN: Thank you, Your Honor.

3 The Complainants would like to call Bala
4 Krishnan.

5 I have got some binders. May I approach?

6 JUDGE BHATTACHARYYA: Yes, you may.

7 We're on the public record.

8 Could you please raise your right hand,
9 Mr. Krishnan.

10 Whereupon--

11 BALA KRISHNAN,
12 having been first duly sworn, was examined and testified as
13 follows:

14 DIRECT EXAMINATION

15 BY MR. SCHARN:

16 Q. Good afternoon, Mr. Krishnan.

17 A. Good afternoon.

18 Q. We have a couple of mics in front of you there.
19 If you can be sure to speak into the mic, I think that
20 would help everybody to be able to hear.

21 Can you please introduce yourself.

22 A. I'm Bala Krishnan.

23 Q. Where do you currently work?

24 A. I work at ArcelorMittal.

25 Q. How long have you worked there?

1 A. I worked there for 37 years.

2 Q. Has it always had the same name the whole time
3 you have worked there.

4 A. ArcelorMittal is a predecessor companies.

5 Q. Can you briefly describe your education starting
6 with your undergraduate degree?

7 A. Sure.

8 I did my undergrad degree at Alard College of
9 Engineering and Technology in India in mechanical
10 engineering, and I did my graduate degree at Illinois
11 Institute of Technology also in mechanical engineering.

12 Q. So Illinois Institute of Technology, that's in
13 Chicago area?

14 A. That's correct.

15 Q. Do you still live in the Chicago area?

16 A. Well, actually, I live in northwest Indiana,
17 which is considered to be the Chicago area.

18 Q. Where is your office?

19 A. Well, my primary office is located in East
20 Chicago, Indiana.

21 I also have a secondary office in Southfield,
22 Michigan.

23 Q. You mentioned East Chicago, is that at an
24 ArcelorMittal facility?

25 A. Yes.

1 East Chicago is where we have our research lab,
2 and we also have office spaces in there, and that's where I
3 work out of.

4 Q. What's your current role at ArcelorMittal?

5 A. I am the director of portfolios for automotive,
6 energy and industry markets.

7 Q. Does ArcelorMittal supply steel in the
8 automotive market?

9 A. Absolutely.

10 Q. Is press-hardened steel one kind of steel that
11 ArcelorMittal supplies for automotive?

12 A. Absolutely.

13 Q. What is press-hardened steel?

14 A. Press-hardened steel is steel which actually
15 when heat treated and quenched achieves a very
16 high-strength and ductility, and makes complex parts, and
17 enables complexity to interaction.

18 Q. Are there any particular brand names that
19 ArcelorMittal sells its press-hardened steel under?

20 A. Of course.

21 They are primarily the Usibor and the Ductibor
22 family of steels.

23 Q. I'd like to ask a little bit about you and your
24 team.

25 About how many people in your team are related

1 to automotive?

2 A. I have 40 people in North America that are
3 related to automotive.

4 Q. Where are those individuals located in North
5 America?

6 A. They're located usually within about four hours
7 from a customer, so we can actually go meet the customer,
8 and interact with them.

9 Q. Does ArcelorMittal have what it considers to be
10 strategic customers?

11 A. Oh, definitely, yes.

12 We have original equipment manufacturers like
13 Ford, Tesla, General Motors. And we also have Tier 1s that
14 are strategically aligned with our business plan, they
15 would be Gestamp, GNS, Magna, Simwon, you can name --
16 Multimatic. Many of them, yes.

17 Q. In working with these strategic customers,
18 what's your team's role?

19 A. Well, my team's role is really in a nutshell, we
20 are the voice of the customer to ArcelorMittal, and we are
21 the voice of ArcelorMittal to the customer.

22 Q. I'd like to look at a little bit about how that
23 plays out in real life. So we're going to get into a
24 confidential exhibit here, Your Honor, so we'd like to go
25 on the confidential record.

1 JUDGE BHATTACHARYYA: We are moving on to the
2 ArcelorMittal confidential record.

3 (Whereupon, the trial proceeded in confidential
4 session.)

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1 O P E N S E S S I O N

2 MS. MORGAN: Ashbey Morgan on behalf of
3 Complainants.

4 We call our next witness, Mark Atkinson.

5 I have a few binders. May I approach?

6 JUDGE BHATTACHARYYA: Yes, you may.

7 Could you please raise your right hand, Mr.
8 Atkinson.

9 Whereupon,

10 MARK ATKINSON, PhD,
11 having been called as a witness, was legally placed under
12 oath, testified as follows:

13 THE WITNESS: Yes, I do.

14 JUDGE BHATTACHARYYA: You may be seated.

15 MS. MORGAN: You can take a seat, Dr. Atkinson.

16 THE WITNESS: Thank you.

17 DIRECT EXAMINATION

18 BY MS. MORGAN:

19 Q. Good afternoon, Dr. Atkinson.

20 A. Good afternoon.

21 Q. Would you please introduce yourself.

22 A. Yes.

23 My name is Mark Atkinson.

24 Q. Where do you currently work?

25 A. Currently, I work for ArcelorMittal, and I'm

1 based in East Chicago, Indiana.

2 Q. Before we get into what you do at ArcelorMittal,
3 could you please describe your educational background for
4 us.

5 A. Yes.

6 I have a bachelor of science degree in energy
7 technology and management, and I have a PhD in mechanical
8 engineering.

9 Q. What did you do after you graduated?

10 A. Well, first, I worked for Rite Aid, but
11 seriously, then I joined National Steel in 1990.

12 Q. Just at a high level, what did you do for
13 National Steel?

14 A. For National Steel, I started at National Steel
15 as a research engineer in iron-making. Then I moved
16 through a series of managerial positions in R&D at
17 National.

18 Q. Did you do anything after National Steel?

19 A. Yes. National Steel was acquired by US Steel,
20 and so then I worked in research and development at US
21 Steel.

22 Q. When did you join ArcelorMittal?

23 A. In November 2007.

24 Q. What is your current role at ArcelorMittal?

25 A. Currently, I have three roles. Currently, I'm

1 senior director of operations at East Chicago. I also have
2 a role as head of project management and global R&D. And
3 then I also oversee or lead our quality management process
4 in global R&D.

5 Q. Let's focus on your role at the East Chicago
6 Center.

7 What is the East Chicago center?

8 A. The East Chicago center is a facility in
9 Indiana. I think you saw earlier today an aerial view of
10 our campus. We have a 42-acre campus, and then a number of
11 buildings on that campus.

12 Q. What do you do as the senior director of
13 operations?

14 A. My role is -- I characterize it as keeping the
15 show on the road. So my role is to enable the technical
16 people to do their technical work.

17 In that regard, for example, I'm the top
18 management representative of our quality management system,
19 our safety management system. I oversee the labor contract
20 with our represented technicians, and then I have other
21 duties, too, but basically, ensuring that we have a
22 facility so that the technical people can do their
23 technical work.

24 Q. Now, as part of your responsibilities, do you
25 regularly work in the laboratories?

1 A. No, I don't.

2 Q. How long have you been based out of East
3 Chicago?

4 A. I have been based out of Chicago continuously
5 since 2007, except for a time period in 2012 to 2013. At
6 that time I was based in Global R&D in Maizières, France.

7 Q. How long have you been in the steel industry?

8 A. Since 1990.

9 Q. I want to focus a little bit on what happens at
10 the East Chicago center.

11 Can you describe that work from a high level?

12 A. Well, at a high level, our mission is product
13 development, developing new products, and enhancing
14 existing products, and then providing the support for the
15 mills to be able to manufacture the products that are being
16 developed.

17 Q. Does the East Chicago center work on
18 press-hardened steels?

19 A. Yes.

20 Q. Which press-hardened steel products?

21 A. The Usibor and Ductibor products.

22 Q. Are there any other press-hardened steel
23 products that the East Chicago lab works on?

24 A. No.

25 Q. Do you have an understanding of which products

1 offered by ArcelorMittal are at issue in this
2 investigation?

3 A. Yes.

4 Q. Which products are those?

5 A. The Ductibor and Usibor products.

6 MS. MORGAN: At this time, I'm going to move
7 into the confidential record, if we could seal the
8 courtroom.

9 JUDGE BHATTACHARYYA: Moving on to the
10 ArcelorMittal confidential record.

11 (Whereupon, the trial proceeded in confidential
12 session.)

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1 C O N T E N T S

2 WITNESS DIRECT CROSS REDIRECT RECROSS

3 Jean-Luc Thirion 74 91

4 Pascal Drillet PhD 99 148 169

5 Bala Krishnan 174 208 223 226

6 Mark Atkinson PhD 228 246

7

8 AFTERNOON SESSION: 125

9

10 CONFIDENTIAL SESSIONS: 79-80; 91-97; 179-227; 223-end.

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1 E X H I B I T S

2 Deposition Designations:

3 Jacob Webb

4 CX-0023C

5 CX-0346C

6 CX-0347C

7 CX-0348C

8 CX-0349C

9 CX-0350C

10 CX-0351C

11 CX-0352C

12 CX-0353C

13 CX-0354C

14 CX-0355C

15 CX-0356C

16 CX-0357C

17 CX-0358C

18 CX-0359C

19 CX-0360C

20 CX-0361C

21 CX-0362C

22 CX-0363C

23 CX-0364C

24 CX-0365C

25 CX-0366C

1 CX-0367C
2 CX-0368C
3 CX-0369C
4 CX-0370C
5 CX-0371C
6 CX-0372C
7 CX-0373C
8 CX-0374C
9 CX-0375C
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11 CX-0377C
12 CX-0378C
13 CX-0379C
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18 CX-0384C
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25 CX-0737C

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4 CX-0741C
5 CX-0742C
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8 CX-0745C
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1 CX-0763C
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4 CX-0766C
5 CX-0767C
6 CX-0768C
7 Brad Pepper
8 CX-0022C
9 CX-0334C
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11 CX-0336C
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19 CX-0344C
20 CX-0345C
21 Brent Yeager
22 CX-0024C
23 CX-0385
24 CX-0386C
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6 CX-0393C
7 CX-0394C
8 James Chronister
9 CX-0025C
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12 CX-0415C
13 CX-0416C
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25 CX-0452C

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7 CX-0459
8 Paul Belanger
9 CX-0028C
10 CX-0319
11 CX-0320C
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24 CX-0333C
25 Jennifer Hong

1 CX-0027C
2 CX-0400
3 CX-0401C
4 CX-0402C
5 CX-0403C
6 CX-0404C
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8 CX-0406C
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13 CX-0411C
14 CX-0412C
15 Rick Nafziger
16 CX-0026C
17 CX-0395
18 CX-0396C
19 CX-0397
20 CX-0398
21 CX-0399C
22 Haroldo Kavamura
23 CX-0017C
24 CX-0307C
25 Praveen Prakash

1 CX-0019C
2 CX-0315C
3 CX-0316C
4 Nguyen Thi Lan Anh
5 CX-0016C
6 CX-0300C
7 CX-0302
8 RX-1009C
9 RX-1010C
10 RX-1260C
11 Ronald Kefferstein
12 CX-0011C
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1 CERTIFICATE OF REPORTER

2 TITLE: CERTAIN HIGH-STRENGTH ALUMINUM OR ALUMINUM-ALLOY
3 COATED STEEL, AND AUTOMOTIVE PRODUCTS AND
4 AUTOMOBILES CONTAINING SAME

5 INVESTIGATION NO: 337-TA-1402

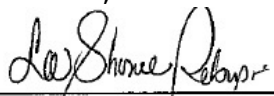
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7 LOCATION: Courtroom A

8 NATURE OF HEARING: Evidentiary Hearing

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13 Date: March 3, 2025

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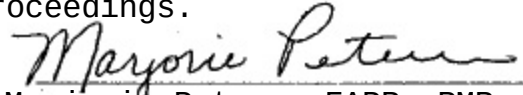
15 Signature of the Contractor of the
16 Authorized Contractor's Representative
17 1150 Connecticut Avenue, Suite 305
18 Washington, D.C. 20036

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34 Marjorie Peters, FAPR, RMR, CRR Court Reporter