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November 28, 2017

The Honorable Lisa R. Barton
Secretary to the Commission
U.S. International Trade Commission
500 E Street, S.W.
Washington, DC 20436

Inv. Nos. 701-TA-573-574 and
731-TA-1349-1358 (Final)

Total Pages: 82

Confidential business information has been removed
from pp.1, 3-6, 8-10, 12, 14, 17, 21, 22, 24,
25, 27-32, 34-36, and Exhibit 5.

PUBLIC VERSION

Re: Carbon and Certain Alloy Steel Wire Rod from Belarus, Italy, Korea,
Russia, South Africa, Spain, Turkey, Ukraine, United Arab
Emirates, and the United Kingdom: Posthearing Brief of POSCO

Dear Secretary Barton:

On behalf of POSCO, a foreign producer and exporter of subject merchandise, we hereby submit the public version of this Posthearing Brief, along with an Appendix containing Answers to Commissioner Questions. Information deleted from brackets is information for which we have requested business proprietary treatment under 19 C.F.R. §201.6. In accordance with 19 C.F.R. §201.8(d) and §207.3, we have electronically filed this brief and are also filing the requisite number of hard copies of the public version with the Commission today.

The requisite certifications are enclosed in accordance with Sections 201.6 and 207.3 of the Commission's rules. This submission has been served on lead counsel for each of the parties listed as indicated on the attached public service list. Pursuant to the Commission's instructions, we request that the Commission treat the photocopied certifications provided with this response as original, signed certifications.

Please let us know if you have any questions concerning this matter.

Respectfully submitted,

/s/ Jarrod M. Goldfeder

Jarrod M. Goldfeder

Warren E. Connelly

Counsel to POSCO

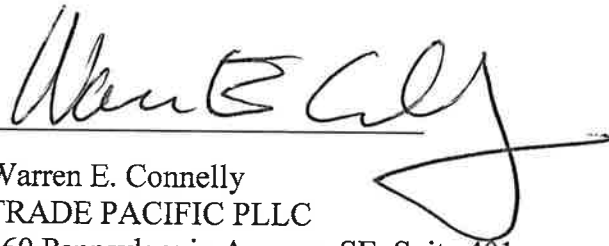
CERTIFICATION OF COUNSEL

In accordance with section 207.3(a) of the Commission's rules, the undersigned certifies that (1) I have read the attached submission, (2) based on the information made available to me by POSCO, I have no reason to believe that this submission contains any material misrepresentation or omission of fact, and (3) the information contained in this submission is accurate and complete to the best of my knowledge.

In accordance with 19 C.F.R. §201.6(b)(3)(iii) of the Commission's rules, the undersigned certifies that substantially identical information for which we have requested confidential treatment is not available to the public.

Pursuant to 28 U.S.C. §1746(2), the undersigned declares under penalty of perjury that the foregoing is true and correct.

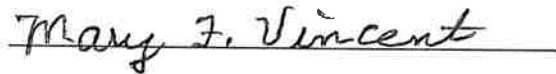
Dated: November 27, 2017



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District of Columbia)
)
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Sworn to and subscribed before me this 27th day of November 2017.


Notary Public for the District of Columbia



My Commission expires: March 31, 2018

U.S. INTERNATIONAL TRADE COMMISSION
Public Certificate of Service

***Carbon and Certain Alloy Steel Wire Rod from Belarus, Italy, Korea, Russia, South Africa,
Spain, Turkey, Ukraine, United Arab Emirates, and the United Kingdom,
Inv. Nos. 701-TA-573-574 and 731-TA-1349-1358 (Final)***

I, Warren E. Connelly, certify that copies of **POSCO's Posthearing Brief (Public Version)** in the above-referenced preliminary phase investigation are being served on this 28th day of November 2017, by hand delivery or e-mail, on the following parties:

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/s/ Warren E. Connelly
Warren E. Connelly

**BEFORE THE
UNITED STATES INTERNATIONAL TRADE COMMISSION**

**CARBON AND CERTAIN ALLOY STEEL WIRE ROD FROM BELARUS, ITALY,
KOREA, RUSSIA, SOUTH AFRICA, SPAIN, TURKEY, UKRAINE, UNITED ARAB
EMIRATES, AND THE UNITED KINGDOM,
INV. NOS. 701-TA-573-574 AND 731-TA-1349-1358 (FINAL)**

**POSTHEARING BRIEF
ON BEHALF OF POSCO**

Submitted by:

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Date submitted: November 28, 2017

I. INTRODUCTION

Twenty years have passed since the Commission first considered in 1997 whether Grade 1080 and higher tire cord wire rod and tire bead wire rod (“TC/TB/WR”) should be treated as a separate like product.¹ The domestic industry initially supported exclusion of Grade 1080 from the scope, and it also initially agreed that it should be treated as a separate like product. Its strategy was to side with the respondents in the 1997 investigation, as well as in the 2002 investigation, with the expectation that domestic wire makers would work with the domestic industry to help them develop Grade 1080 and higher production capabilities, which they did not then possess. Tr. 103 (Rosenthal). However, this expectation was allegedly disappointed because, “to the domestic industry’s dismay, once that exclusion was granted, a lot of low priced 1080 tire cord and tire bead continued to come into the country {so} there really wasn’t an incentive to work with the domestic producers.” Tr. 103-104 (Rosenthal).

But, the record does not support the claim that two decades of allegedly low priced imports have prevented the domestic industry from developing Grade 1080 and higher capabilities. In fact, the record shows that subject imports of Grade 1080 and higher TC/TB/WR were priced [] domestic-origin products between 2014 and 2017. Moreover, the domestic industry has been profitable in many of the last 20 years, as the Commission found in its negative preliminary determination in the countervailing duty investigation of Carbon and Alloy Steel Wire Rod From China, Germany, and Turkey, (Preliminary), USITC Pub. 3832 at 4-5 (January 2006):

U.S. prices increased significantly during the period examined. . . . In 2004 and interim 2005, when subject imports had their greatest market share, the U.S.

¹ See Certain Steel Wire Rod From Canada, Germany, Trinidad & Tobago, and Venezuela, (Final), USITC Pub. 3075 at 5-9 (November 1997). See also USITC Pub. 3087 (March 1998), which reached the same result with respect to the four companion antidumping investigation as it did in the countervailing duty investigation that preceded it.

industry increased unit sales values at a rate faster than the increase in their unit raw material costs. . . . The U.S. industry was profitable in each year of the period examined except 2003, when subject import volume was at its lowest level. The profitability of the U.S. industry reached record levels in 2004 even as subject import volume was at its highest level. . . . The industry is not in a vulnerable state. In particular, the operating income ratio remained healthy in interim 2005. . . . The record indicates that subject imports had no significant adverse effects on U.S. prices throughout the period examined. . . .

Accordingly, the supposed rationale for the domestic industry's failure to develop Grade 1080 tire cord capabilities just does not wash. Moreover, it defies credibility that, throughout the last two decades, low priced imports have been the only reason why the domestic industry has not been able to produce commercial quantities of Grade 1080 and higher TC/TB/WR.

The real reason is that the petitioners have long perceived the market for Grade 1080 and higher TC/TB/WR as very small compared to the market for all other forms of CASWR. In fact, they call that market "tiny."² Tr. 40 (Rosenthal). Thus, until very recently, they have perceived that it has not been worth their time, money, or effort to enter. Moreover, the domestic industry's use of steel billets produced in an electric arc furnace makes the job of producing Grade 1080 tire cord wire rod far more difficult.³ That is why one domestic producer, Nucor, appears to have needed imported BOF billets to produce tire bead wire rod. Tr. 46 (Nystrom) ("{W}ire rod for tire applications can be rolled in the United States by purchasing billets from a BOF producer.")

The Commission now controls the fate of the domestic tire industry because tire makers will inevitably experience economic duress and/or supply shortages without access to subject

² To the domestic tire makers, this "tiny" market is the only one that matters.

³ For example, the steel that is used to make tire bead wire rod can be manufactured using an aluminum type refractory in the ladle. In contrast, tire cord chemistry requires a different refractory and a different type of ferroalloy with a lower aluminum content. Moreover, a bubbling treatment is added in the ladle furnace process in order to remove non-metallic inclusions when producing BOF steel for use in the production of tire cord.

imports of the Grade 1080 and higher TC/TB/WR that subject producers sell exclusively to domestic wire makers:

Anti-dumping or countervailing duties on these products would have no impact on Petitioners' performance and sales . . . while significantly disrupting the production of tires in the United States, due to quality and supply limitations in domestically producing Grade 1080 steel for tire manufacturing. The disruption in tire manufacturing in the United States would harm the U.S. economy, since consumers and businesses depend on a reliable supply of tires to safely move goods and people throughout the country.⁴

Tr. 173 (Norberg). The domestic tire industry employs over 100,000 workers, while the domestic industry producing Grade 1080 and higher TC/TB/WR employed a total of [] during the POI. Tr. 169 (Norberg); Preh. Rept. at C-7 (Table C-3a). Thus, a finding that Grade 1080 and higher TC/TB/WR is not a separate like product would adversely affect an enormous number of American workers, while providing benefits to a truly [] domestic industry that domestic producers have chosen for at least 20 years to decline to develop despite ample opportunities to do so.⁵

II. THE RECORD DEMONSTRATES THAT THERE ARE JUST A HANDFUL OF FOREIGN PRODUCERS THAT CAN PRODUCE GRADE 1080 AND HIGHER TIRE CORD WIRE ROD

The only subject foreign producers of Grade 1080 tire cord wire rod are POSCO, British Steel, and, possibly, Byelorussian Steel Works (“BSW”). Despite petitioners’ contrary

⁴ The domestic industry has not disputed the respondents’ assertion that TC/TB/WR is not used for any other application due to its unique steel chemistry and high price. Indeed, the Commission found in 1997 that, “Tire cord wire rod is the only suitable input for the production of tire cord.” USITC Pub. 3075 at 8.

⁵ The preliminary antidumping margins for the subject producers are sufficiently high as to indicate that their finalization at Commerce will necessitate either a significant price increase by those producers, which non-subject producers will be happy to follow, or else cause the subject producers to drop out of the market entirely. Either way, wire makers and tire makers will pay significantly more for their Grade 1080 and higher tire cord and tire bead material. See Prehearing Report at I-13 (Table I-5) for the preliminary margins. On November 20, 2017, the Commerce Department revised upward POSCO’s original preliminary margin of 10.09% to 40.80% in order to correct an unintentional ministerial error. See Exhibit 1.

contention, a fourth subject producer located in Spain, the CELSA Group, does not produce Grade 1080 and higher tire cord wire rod based on POSCO's examination of publicly available information, including the website excerpts that petitioners submitted during their closing remarks at the hearing.

In addition, the website excerpts of the Belarus producer, BSW, which the petitioners also submitted during their closing remarks, do not state that it produces higher than Grade 1080 tire cord or tire bead wire rod. Moreover, BSW [

] See answer to question no. III-11. BSW also appears not to care about the U.S. market since it did not participate in the Commerce Department investigation, and, as a result, received a "total facts available" preliminary antidumping margin of 280.22%. Preh. Rept. at I-12 (Table I-4).⁶

To the best of POSCO's knowledge, there are just four non-subject foreign producers of tire cord wire rod, which are: Saerstahl (Germany); Nippon Steel and Kobe Steel (Japan); and ArcelorMittal (Brazil).⁷ Petitioners do not contest the claim of purchasers that multiple sourcing is essential. Rather, they insist that domestic producers themselves constitute the requisite "multiple sources." Tr. 64-65 (Rosenthal) ("There's plenty of capacity in the U.S. market to supply almost all of the demands in the marketplace.") However, this is not the case with respect to Grade 1080 and higher tire cord wire rod, which no domestic producer can consistently produce for the reasons that POSCO summarized in its Prehearing Brief (at 11-19).

⁶ See Carbon and Alloy Steel Wire Rod From Belarus: Preliminary Affirmative Determination of Sales at Less Than Fair Value, 82 Fed. Reg. 42796 (Sept. 12, 2017).

⁷ Petitioners testified that they were aware of TC/TB/WR producers only in Japan and Germany, but did not identify them. Tr. 104 (Rosenthal).

The hearing testimony confirmed the respondents' contention that none of the petitioners can consistently produce commercial quantities of Grade 1080 and higher tire cord wire rod. Nucor is "just at the beginning stages of producing tire bead." Tr. 127 (Nystrom). In fact, Nucor [

] See Nucor's answers to question nos. II-9 and V-2. Similarly, Keystone produces only tire bead wire rod. Tr. 41 (Armstrong). Neither company claimed that it is even remotely close to producing Grade 1080 tire cord wire rod. And, given that it took POSCO five years to master Grade 1080 tire cord wire rod production, it is reasonable to conclude that neither Nucor nor Keystone will be able to produce this product in the reasonably foreseeable future.⁸ Tr. 166 (Rhee).

The third alleged domestic producer is Evraz Rocky Mountain Steel, which failed to appear at both the staff conference and the hearing. However, the staff's persistence has yielded a series of [

⁸ The defunct domestic producer, ArcelorMittal, never produced Grade 1080 or higher TCTBWR at its Georgetown, SC mill. Tr. 220-221 (Cameron). See also [

] Surprisingly, Gerdau claimed that it, too, produced tire bead wire rod. Tr. 51 (Canosa). However, Gerdau's questionnaire response [

] See answer to question no. II-9.

] Evraz cannot make either tire cord or tire bead wire rod with a carbon content greater than 0.8 percent, according to the carbon content range listed on its own website.

Thus, Evraz has itself [

]

As we discuss in more detail below, tire makers are now demanding tire cord wire with a much higher carbon content than 0.8% due to their demands for greater tensile strength combined with lighter weight. No domestic producer has indicated an ability or intention to produce any of these higher grades, which are growing fast in their importance. In contrast, [] of POSCO's production of TC/TB/WR during the POI consisted of Grade 1080 and higher products.

In contrast, the domestic industry can produce every other CASWR product that falls within the "continuum." For example, Nucor's witness stated that:

we make some products that would be aircraft quality that could be bearing quality, parts that go into high rotating applications that are very safety critical, that have very exacting specifications regarding inclusion size and cleanliness and so forth. Tr. 110 (Nystrom).

Similarly, Gerdau testified that:

Gerdau is a dedicated world-class producer of wire rod. Our very broad range of wire rod products includes low carbon, high carbon, welding quality, cold heading quality, tire bead, and many other specialty types of rod. Tr. 51 (Canosa).

Keystone similarly testified that:

We produce a wide range of wire rod products from low and medium carbon rods to the more technically demanding CHQ and high carbon wire rods.
Tr. 41 (Armstrong).

If domestic producers can make all of the sophisticated wire rod products that Nucor, Gerdau, and Keystone identified by using EAF billets, then their inability or failure to make Grade 1080 and higher tire cord wire rod by using those same EAF billets demonstrates a material difference in the nature of that product and the technological expertise that a producer needs to make it. These new facts, among many others, help to establish the required clear dividing line.

III. SUBJECT IMPORT PRICES HAVE NOT PREVENTED THE DOMESTIC INDUSTRY FROM MAKING THE INVESTMENTS AND ACQUIRING THE TECHNOLOGICAL EXPERTISE THAT THEY NEED TO PRODUCE GRADE 1080 AND HIGHER TC/TB/WR

Domestic producers have asserted that the unavailability of suitable BOF raw material and their lack of production expertise are not the reasons why they cannot produce TC/TB/WR. Rather, subject imports of TC/TB/WR have allegedly been priced so low for the last 20 years as to deny them the revenues that they would otherwise have invested in the equipment and technical knowhow that they need to produce it:

What happened was to the domestic industry's dismay, once that exclusion {from the scope} was granted, and a lot of low priced 1080 tire cord and bead continued to come into the country, there really wasn't an incentive by the customers to work with the domestic producers. They could get the cheap {imported} tire cord and bead product. And so, why give contracts or work with the domestic producers to develop that 1080 tire cord product, in particular? Tr. 103-104 (Rosenthal).

Similarly, Keystone claims that:

We don't make the 1080 tire cord yet, although I tried – I have absolutely looked at and have quotes, and project, full project spec'd out to be able to invest in equipment to make that. But I can't any more afford the investments, the return of investment because of the prices of that material as a result of the imports.

Even that small part of the market restricts me from doing so. Tr. 70-71 (Armstrong).

But, the claim that low priced imports of subject TC/TB/WR have destroyed any incentive to invest in the equipment and expertise needed to produce Grade 1080 tire cord wire rod is demonstrably wrong for at least three reasons.

First, since the domestic industry already produces Grade 1070 and lower tire cord and tire bead, it asserts that it already possesses the equipment and knowhow needed to produce Grade 1080 and higher tire cord:

from the wire rod producers standpoint, tire bead and tire cord are made on the same equipment. It's the same type of rolling mill, same type of melt shops. It can be EAF, it can be a BOF shop, so it's just a different product among many products that we make that are wire rod. Tr. 92-93 (Nystrom).⁹

Thus, by their own admission, little or no additional investment in equipment or development of production expertise is required. Accordingly, it cannot be the case that low prices of subject imports have prevented domestic producers from making the investments of money and time needed to learn how to produce Grade 1080 and higher tire cord wire rod.

Second, subject Grade 1080 imports [] as the following table demonstrates.

⁹ See also Tr. 107 (Price): "I generally don't agree that the specifications are – draw any bright line difference at 1080 tire cord versus for example a 1070 product." This assertion begs the question as to why, if there is no bright line, the domestic industry has been unable to produce Grade 1080 and higher tire cord since at least 1997.

**Average Unit Values of U.S. Commercial Shipments of Grade 1080 and Higher
Tire Cord and Tire Bead Wire Rod**

(AUV shown in \$/Short Ton)	Calendar years			Interim 2017
	2014	2015	2016	
Importers' Commercial Shipment AUV	[]
U.S. Producers' Commercial Shipment AUV	[]
Percent by which Subject Import AUV exceeds U.S. Producer AUV	[]

Sources: U.S. Producer Questionnaires at V-2; U.S. Importer Questionnaires at IV-1, IV-2, and IV-3.¹⁰

Third, the domestic industry has been protected from unfair trade since 2002 beginning with the antidumping and countervailing duty petitions that the domestic industry successfully filed in 2001.¹¹ Yet, despite the longstanding importance of multiple sources of Grade 1080 and higher TC/TB/WR to both wire makers and tire makers, the domestic industry has declined for two decades to make the necessary investments needed to provide multiple sourcing. In contrast, POSCO first exported Grade 1080 tire cord to the U.S. in 2007.

As noted above, only two conclusions are possible. Either domestic producers have been unable to develop the technological expertise that is needed to produce Grade 1080 and higher tire cord wire rod, or else they perceive that the market for this product is so small as not to warrant the effort to produce it in commercial quantities. Domestic producers confirmed the latter likelihood when they emphasized that the market for TC/TB/WR was “tiny” and “minuscule”:

¹⁰ Although there may be product mix differences, the information in this table is the only pricing information available in the record on Grade 1080 and higher TC/TB/WR. Respondents requested that a TC/TB/WR Pricing Product be added to the questionnaire, but it was not added. Thus, the information in this table is the best available information.

¹¹ The 1997 AD and CVD petitions against Canada, Germany, Trinidad & Tobago, and Venezuela resulted in the Commission’s negative final determination. However, after two sunset reviews, the 2002 antidumping duty orders remain in effect on Brazil, Indonesia, Mexico, Moldova, and Trinidad & Tobago, and the CVD order on Brazil also remains in effect. See Preh. Rept. at I-8 (Table I-1). China, too, is the subject of AD and CVD orders.

As this confidential slide shows, that product represents a tiny part of the market and a tiny percentage on increased volumes of subject imports. . . {W}e want you . . . to understand the relatively small portion of the market that 1080 tire cord and bead represents in this industry and imports overall. As you look at that 700,000 tons of imports that came in from the subject imports, understand how minuscule a proportion of that import surge was represented by 1080 tire cord and bead. Tr. 40 (Rosenthal).¹²

In light of this admission, the Commission should reasonably conclude that the domestic industry has chosen not to develop its Grade 1080 tire cord and tire bead wire rod capabilities due to a lack of interest, and not to a lack of a sufficient economic incentive that is attributable to low or cheap import prices. Of course, if the petitioners are also claiming that they cannot develop Grade 1080 and higher tire cord wire rod production due to the dumping of other forms of CASWR, then they remain unable to explain why they failed to develop this capability despite having been fully protected from unfair trade beginning in 2002.

IV. THE COMMISSION'S PRIOR LIKE PRODUCT DETERMINATIONS HAVE NOT REACHED THE ISSUES THAT THE RESPONDENTS HAVE RAISED IN THIS INVESTIGATION, NOR HAVE THE RECORDS IN THOSE INVESTIGATIONS PERMITTED IT TO REACH THOSE ISSUES

Vice Chairman Johanson and Commissioner Broadbent both inquired as to the factors that were different today from those that were discussed in the prior investigations.¹³ The Commission did not consider the following critical facts, among others, in its four previous investigations: (a) the fast-growing significance in recent years of Grade 1080 and higher tire cord wire rod to both wire makers and tire makers; (b) the failure of the domestic industry to make any effort to invest in Grade 1080 and higher tire cord wire rod production capabilities

¹² Subject imports of Grade 1080 and higher TC/TB/WR constituted just [

]
¹³ See question no. 2 of Vice Chairman Johanson and question no. 3 of Commissioner Broadbent in the attached Appendix containing Commissioner questions and POSCO's answers. We provide a summary of the issues that the Commission reached, or did not reach, in its determinations in the four prior investigations in the attached answer to question no. 2 from Vice Chairman Johanson.

between 1997 and the present despite its supposed importance to the industry and their claimed ability to do so; and (c) the serious problems that domestic producers have encountered when trying to use EAF technology to make a product that is uniquely suited to production using steel billets produced in a basic oxygen furnace.

Nevertheless, the domestic industry strenuously contends that the respondents have provided no new facts or arguments why the Commission should again consider whether Grade 1080 and higher TC/TB/WR should be treated as the same like product as all other forms of CASWR:

There have been no new facts presented, no new arguments presented that you haven't considered before and rejected and the same thing is true today. And there's no good reason to change your determination. Tr. 39 (Rosenthal).¹⁴

Those claims are demonstrably incorrect for the reasons we now explain.

A. No Domestic Producer Has Proved that It Can Consistently Produce Grade 1080 and Higher Tire Cord Wire Rod Using Steel Billets Produced in an Electric Arc Furnace

By 2006, i.e. nine years after its 1997 determination that allegedly dumped and subsidized imports from four countries had not caused material injury to the domestic industry and after almost five subsequent years of protection from unfairly traded imports beginning with the seven antidumping duty orders and two countervailing duty orders issued in 2002, the domestic industry had still not acquired the expertise to produce Grade 1080 and higher tire cord wire rod. This was true despite strong profits and high prices for the remainder of the CASWR products that they produced. It was also true despite their protestations, which continue to this day, that there is little difference between Grade 1070 tire cord wire rod and Grade 1080 and

¹⁴ Similarly, Nucor stated that, "I don't think anything has changed. I don't think any of this record has changed in any significant manner. . . . From the prelim or from prior investigations." Tr. 108-109 (Price).

higher tire cord wire rod. If it was that simple, why have 20 years elapsed since the domestic industry expressed its intention to learn how to produce Grade 1080 TC/TB/WR?

The answer must be that there is something substantively different about producing Grade 1080 and higher products that the domestic industry has yet to resolve. After all, they continue to insist that the same equipment is used for all grades of tire cord wire rod, and they already produce Grade 1080 tire bead wire rod, albeit in limited quantities. So, it appears that the domestic producers have deliberately decided not to explain to the Commission the real reasons why, after 20 years, they still cannot produce Grade 1080 and higher tire cord wire rod.

In contrast, the respondents have explained precisely why the domestic industry still cannot produce this product. See POSCO's Prehearing Brief at 6-19. See also Tr. 166-169 (Rhee) (explaining all of the problems that POSCO needed to overcome in order to produce Grade 1080 and higher TC/TB/WR). Specifically, the switch of the domestic industry to EAF steelmaking means that it is far more difficult to consistently produce the "clean" steel that must be used to produce high carbon wire rod and the resulting exceedingly thin drawn wire that has the tensile strength and durability to withstand the pressures exerted by high performance and increasingly larger steel belted radial tires. POSCO does not assert that it is physically impossible to make sufficiently "clean" steel using EAF technology. Nor does it assert that the domestic industry has been completely unable to meet the demanding specifications of the wire makers and the tire makers.

However, the questionnaire responses and hearing testimony of the [] domestic wire producers unanimously state that no domestic producer is currently capable of producing Grade 1080 and higher tire cord wire rod. The petitioners did not contradict these statements. Instead, they claim that they can produce tire bead wire rod, which

is concededly much easier to produce because it is not drawn nearly so thin as tire cord wire rod, They also have (exceedingly vague) plans to produce Grade 1080 (but no higher) tire cord wire rod. This 20 year history of technological inability is one key factor why the Commission should now find a clear dividing line. The four prior CASWR investigations have not revealed the extent of this inability and/or unwillingness.

In short, the domestic industry's assurance that they are just a tiny step away from getting into the Grade 1080 and higher tire cord business if only the Commission will impose antidumping (and countervailing) duties on all subject producers of all forms of CASWR, including TC/TB/WR, lacks the slightest shred of credibility.

B. Unlike the Record in All Prior Investigations and Reviews, the Commission Possesses Specific Information Demonstrating the Lack of Any Adverse Impact of Subject Imports of Grade 1080 and Higher TC/TB/WR on the Domestic Industry

The Commission for the first time has collected a significant amount of information and data on Grade 1080 and higher TC/TB/WR products, including: (1) production, shipment and inventory data from both domestic and foreign producers; (2) average unit values for commercial shipments charged by domestic producers and subject importers; (3) the domestic industry's financial condition and employment; and (4) purchaser perceptions of the production capabilities of domestic and foreign producers; and (5) opinions concerning the "comparability" of Grade 1080 and higher products to other types of CASWR.¹⁵ Even a cursory review of this information demonstrates that the erroneous nature of the petitioners' claim that the record contains no new facts that bear upon the separate like product issue. We discuss the significance of this information in the Appendix in response to Commissioner Broadbent's question no. 5.

¹⁵ See, e.g., Prehearing Report at I-24 through I-36; IV-17 through IV-18 (Table IV-9); V-35 through V-37 (Table V-13); V-39 (Table V-15); C-6 through C-7 (Table C-3a); D-1 through D-10 (Tables D-1 and D-2); and E-1 through E-9 (Tables E-1 through E-7).

C. The Performance Standards for Tire Cord Wire Rod Have Changed Significantly Since 1997

In its 1997 investigation, the Commission considered the relevance of a scope exclusion for TC/TB/WR products with a carbon content of 0.68 percent and above. In its 2002 investigation, the Commission considered the relevance of a scope exclusion for TC/TB/WR products with a carbon content of 0.78 percent and above. In its 2006 investigation, the Commission referred to Grade 1080, but did not discuss the actual carbon content of tire cord and tire bead wire rod that it intended to include in the like product definition. Today, the carbon content of tire cord wire rod includes grades that substantially exceed 0.80 percent. For example, Kiswire stated that:

The thing is is right now, every time the tire industry they want a better wire, a lighter tire, we have to produce this wire stronger, they've gone from back then of where they ran what they call normal tensile wire as the tensile strength. They went to a high tensile {strength}. They went to a super tensile {strength}. They're now at an ultra-high tensile {strength}. Every time they increase the tensile {strength}, we have to increase the carbon in the rod that we use. So we're now from using 70 back then to using 80, 85 and 90. In some cases, we're using 85 with chromium, which even makes it harder. Tr. 218-219 (Minnick).

In confirmation of these heightened carbon content and resulting tensile strength requirements, POSCO has previously provided to the Commission information establishing that it produces tire cord wire rod with the following carbon content ranges: [

] See POSCO's Post-Conference Brief at 7. The Commission has never before considered the relevance of these greatly increased carbon content and tensile strength requirements on the like product definition, which are reflected in the growing significance of larger tire sizes (as measured by the diameter of the steel wheels upon which the tires are mounted). Modern Tire Dealer reports that "Large rim diameters take over," with 17 inch sizes and above representing 56.4% of all 351 tire sizes. See Exhibit 2 at 38. Moreover, North

American tire manufacturing capacity increased by 4.6% in 2016 compared to 2015. Id. at 42-43.

V. THERE IS NO POSSIBILITY THAT THE DOMESTIC INDUSTRY HAS BEEN MATERIALLY INJURED OR IS THREATENED BY SUBJECT IMPORTS OF GRADE 1080 AND HIGHER TC/TB/WR

None of the alleged adverse effects of subject imports on the domestic industry apply to subject imports of Grade 1080 and higher TC/TB/WR. We refer the Commission to POSCO's Answer to Commissioner Broadbent's Question no. 5 for a thorough analysis of the record on the injury and threat issues. This record makes clear that there is no possibility that the subject imports, which the petitioners themselves have characterized as "minuscule" in the context of the entire CASWR market, had the slightest impact on the domestic industry or threaten to cause material injury within a reasonably foreseeable time.

VI. CONCLUSION

Petitioners have not shown that they deserve or need protection from subject imports of Grade 1080 and higher TC/TB/WR. Petitioners have insisted for many years that low priced imports of Grade 1080 and higher TC/TB/WR have prevented them from taking the steps necessary to produce commercial quantities of this product line. However, that claim is demonstrably wrong for all of the reasons discussed above. Therefore, the Commission should reach a separate like product determination for Grade 1080 and higher TC/TB/WR and then find that the domestic industry has not been materially injured and is not threatened with material injury by reason of subject imports of the separate like product.

Respectfully submitted,

/s/ Jarrod M. Goldfeder
Jarrod M. Goldfeder
Warren E. Connelly

APPENDIX: ANSWERS TO COMMISSIONER QUESTIONS

Question of Chairman Schmidlein

- 1. Are there other high end products that require the same tightly managed process and sort of cleanliness of the steel {as Grade 1080 and higher TC/TB/WR}? Tr. 110.**

ANSWER: The difference between these other high end products and Grade 1080 and higher TC/TB/WR is that the domestic industry's witnesses testified that they can make them using EAF billets despite the fact that they are more difficult to make than the standard industrial grades of CASWR. However, a difference in kind clearly exists with respect to Grade 1080 and higher tire cord wire rod because the domestic industry still cannot make the product using EAF billets after 20 years of experimentation and despite protestations that they can: (a) produce "clean" steel in their electric arc furnaces; (b) use the same equipment as they use to produce Grade 1070 TC/TB/WR; and (c) produce Grade 1080 (but not any higher grade) tire bead wire rod. Thus, even though other high end products, such as CHQ, suspension spring wire rod, and bearing quality rod, may require stringent process controls and clean steel, the domestic industry has been able to produce them with little apparent difficulty. Yet, they remain unable to produce Grade 1080 and higher tire cord wire rod using the same raw material.

Questions of Vice Chairman Johanson

- 1. Petitioners have said subject imports have squeezed the domestic industry profit margins. Are they wrong about that? Tr. 200.**

ANSWER: Insofar as subject imports of Grade 1080 and higher tire cord and tire bead wire rod are concerned, the petitioners are wrong in claiming that subject imports have squeezed the domestic industry's profit margin. As shown in Section III of POSCO's accompanying Posthearing Brief, the commercial shipment prices of subject imports [

]

- 2. Given the Commission's consistent single like product definition for wire rod, to what extent is respondent's like product argument premised on technological or market changes since prior investigations? Or do you all simply contend that the Commission got it wrong when it rejected similar arguments in the past? Tr. 216.**

ANSWER: The respondents do not contend that the Commission got it wrong when it found a single like product in prior investigations. Instead, there have been significant technological changes in the past 20 years and, equally important, despite ample opportunities, the domestic industry has simply failed to develop the necessary production expertise to make Grade 1080 and higher tire cord wire rod. Moreover, in its previous investigations, the Commission did not

compile an administrative record that allowed a far-reaching inquiry into the domestic industry's contention that low priced subject imports of TC/TB/WR had made it impossible for domestic producers over the past 20 years to make the investments necessary to produce Grade 1080 and higher tire cord wire rod.

The Commission has conducted four investigations since 1997 in which it has discussed the Grade 1080 issue. The first one was the countervailing duty investigation in Certain Steel Wire Rod From Canada, Germany, Trinidad & Tobago, and Venezuela, (Final), USITC Pub. 3075 (November 1997), in which the Commission reached a negative final determination.¹⁶ The Commission included all grades of tire cord wire rod in its like product determination, even though the scope of the investigation expressly excluded all coiled products with “carbon greater than or equal to 0.68 percent.” Id. at 5-6. The record in that investigation does not appear to have contained any information concerning the extent to which the domestic industry produced any grade with a higher than 0.68 percent carbon content. Id. at 9, fn. 33.

The second investigation was Carbon and Certain Alloy Steel Wire Rod From Brazil, Canada, Germany, Indonesia, Mexico, Moldova, Trinidad and Tobago, Turkey, and Ukraine, (Final), USITC Pub. 3526 (October 2002). The Commission again included all grades of tire cord wire rod in its like product determination, even though the scope of the investigation expressly excluded tire cord and tire bead wire rod with “0.78 percent or more of carbon” by weight. Id. at 5-6. But, the Commission specifically noted that, “There is no information on the record indicating significant differences among grades of tire bead wire rod, and the record

¹⁶ Antidumping petitions were simultaneously filed on these same four countries. The Commission issued its final determination in the antidumping investigation on a later date, but on basis of the same record as it examined in the CVD case. See USITC Pub. 3087, (Final), (March 1998). This determination, which was also negative, contained no discussion of the Grade 1080 issue. Rather, the Commission simply affirmed its like product determination in the countervailing duty investigation.

reflects only minimal differences among grades of tire cord wire rod.” *Id.* at 8. For example, the record in that investigation did not contain any information concerning the extent to which the domestic industry produced, or was capable of producing, any grade of TC/TB/WR with a higher than 0.78 percent carbon content.

In contrast here, for the first time, the record indicates very significant differences between TC/TB/WR with a maximum carbon content of 0.68 percent or 0.78 percent, on the one hand, and Grade 1080 and higher, on the other, which currently can have a carbon content that is as high as 0.9 or almost 1.0 percent.¹⁷ Tr. 218 (Hughes).¹⁸ This difference is highly significant from a production equipment and technological standpoint.

The Commission found in 2002 that Grade 1070, Grade 1080, and Grade 1090 tire cord wire rod “have the same physical characteristics, uses, prices, channels of distribution and production processes.” USITC Pub. 3546 at 9. However, the Commission did not find that any domestic producer was able to produce Grade 1080 and higher TC/TB/WR in 2002. Even more important, the record in this investigation establishes that, despite the alleged similarities among the three grades of tire cord wire rod, domestic producers for the last 20 years have not been able to produce Grade 1080 and higher tire cord wire rod. Clearly, there must be significant

¹⁷ For example, the tensile strength of Grade 1070 wire rod is 1,000 megapascals at 5.5 millimeters, while the tensile strength of Grade 1080 is 10 percent greater at 1,100 megapascals. Prehearing Report at I-27. The tensile strength of Grade 1090 is 1250 megapascals, which is 25 percent greater than Grade 1070. See Exhibit 3, which is an excerpt from the website of the Brazilian producer, ArcelorMittal. Tensile strength is the capacity of a material to withstand loads tending to elongate. In other words, it is the resistance of a material to tearing apart or breaking under tension.

¹⁸ British Steel produces tire cord wire rod with a carbon content as high as 0.96 percent. See Exhibit 4.

differences in production techniques and technological expertise that have prevented them from doing so.¹⁹

The third investigation was Carbon and Certain Alloy Steel Wire Rod From China, Germany, and Turkey (Preliminary), USITC Pub. 3832 (January 2006). In that investigation, the petitioners for the first time included Grade 1080 TC/TB/WR within the scope of the investigation. Id. at 8. Although the Commission reached a negative preliminary determination, it once again included “1080 grade products” in its like product definition. Id. at 9-11.

However, the petitioners reported in that investigation that, “the domestic industry does not currently produce the 1080 and 1090 grades of tire cord quality wire rod.” Id. at 9, fn. 34. This was surprising in light of the Commission’s finding that domestic industry prices “increased significantly during the period examined” and that the “U.S. industry was profitable during each year of the period examined except 2003, when subject import volume was at its lowest level.” Id. at 4, 5. In other words, despite high prices and strong and continued profitability, the domestic industry had not used its enhanced financial resources between 1997 and 2006 to develop the capability to produce Grade 1080 and higher tire cord wire rod.

The last investigation was Carbon and Certain Alloy Steel Wire Rod From China, (Final), USITC Pub. 4509 (January 2015). However, the Grade 1080 issue was not discussed in any depth because, “there is no argument that the Commission should adopt a definition of the domestic like product different from that in the preliminary determinations.” Id. at 6. And, in its preliminary determination, the Commission stated that no party argued for a different like

¹⁹ The Commission has conducted two sunset reviews of the antidumping orders that were issued as a result of the 2002 investigation. However, no party argued in either review that the Commission should adopt a different like product definition than it adopted in the original investigation. See USITC Pub. 4014 at 7 (First Review) (June 2008); USITC Pub. 4472 at 9 (Second Review) (June 2014).

product definition than the definitions “in prior wire rod investigations and reviews.” USITC Pub. 4458 at 6 (March 2014).

In summary, the four prior investigations did not explore any of the factual issues that have become vastly more important over the course of the past 20 years to producers of tire cord wire and tire makers who rely upon that wire. Equally important, the Commission has never considered the relevance of the domestic industry’s claim that they have desired to produce Grade 1080 and higher TC/TB/WR since at least 1997, but have been prevented from doing so by low priced imports.

3. **Could all please explain how the use of a blast oxygen furnace versus an electric arc furnace to produce raw steel in imparts differences in the resulting wire rod produced from the raw steel? And do you all have any industry or metallurgical literature that supports and describes the differences that you identified, particularly as they relate to tire cord. Tr. 221.**

ANSWER: Attached as Exhibit 5 is the English language version of a confidential study that POSCO prepared in April 2017 that is captioned “The Advantage of BOF Compared to EAF in Tire Cord.” The metallurgical literature supporting each conclusion is identified on each page of this study. In summary, the study shows, [

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All of these problems and many more, including carbon segregation, surface quality, and decarburization (excessive reduction of carbon on the surface of the steel), must be conquered in order to produce tire cord wire rod from EAF steel. The difficulties in doing so help to explain why EAF producers still cannot produce Grade 1080 and higher tire cord wire rod in commercial quantities.

4. **I have a question for POSCO. You all might have an answer for this. Nucor has argued that the Korean automotive industry is experiencing a crisis with plummeting sales and they state this at page 29 of their Brief. Could you please explain the status of the Korean auto market and what is driving any crisis and how should this factor into any threat analysis in your view? Tr. 235.**

ANSWER: Nucor's claim of a "crisis" in the Korean auto industry is greatly exaggerated.

Attached as Exhibit 6 are excerpts from POSCO's 2016 Earnings Release and from its Third Quarter 2017 Earnings Release. The former document shows that Korean auto production increased by 31,000 units between 2014 and 2015 before declining by 327,000 units, or by 7%, between 2015 and 2016. However, production in 2017 has increased, according to the latter document. Specifically, 2017 production is estimated at 4,474,000 units, which is an increase over 2016 of 245,000 units or 5.8%. This increase is attributable to "improved domestic and export sales and the base effect of {the automobile workers} strike last year." Articles documenting the effects of the autoworkers strike on 2016 production are provided in Exhibit 7.

Automobile production in Korea is an extremely inferior measure of the health of domestic and foreign producers of TC/TB/WR. The far better measures are tire production or tire sales because auto production only takes into account the use of OEM tires on new vehicles. Thus, sales or production of replacement tires, which constitute a considerable portion of total tire sales, are not taken into account. For example, in the United Kingdom sales of replacement tires in 2014 constituted 72% of total tire sales. See Exhibit 8.

Similarly, despite the decline in auto sales in Korea, tire sales in Korea actually increased during the POI:

2014: 25,951,000 units
2015: 25,276,000 units
2016: 26,235,000 units

See http://www.dt.co.kr/contents.html?article_no=2017110702100932052001&ref=naver).

Moreover, Exhibit 2 (at 26) shows that, in 2016, replacement tire sales in the United States totaled over \$38 billion.

Questions of Commissioner Broadbent

1. **Can the increase in the volume of subject imports be explained by purchasers' desire for multiple sources of supply, since a lot of purchasers are facing integrated producers and to be dependent on your competition for the inputs is Tr. 64.**

ANSWER: The premise of this question, which is that subject imports increased during the POI, is not entirely accurate insofar as subject imports of Grade 1080 and higher TC/TB/WR are concerned. According to Table C-3a in the Prehearing Report, [

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The import trends for TC//TB/WR compared to other CASWR products do not evidence the slightest possibility of having caused material injury to the domestic industry. Moreover, any increases can be explained by the desire of purchasers for multiple sources. To date, as explained in the text of POSCO's Posthearing Brief, there appear to be just four non-subject producers of Grade 1080 and higher tire cord wire rod, and no domestic producers are able to product this product on a consistent commercial basis. If wire makers and tire makers are denied the opportunity to purchase from POSCO and British Steel, then their opportunity for multiple sourcing will be greatly diminished. Moreover, the domestic industry will not benefit from this result since the record shows that domestic producers cannot consistently satisfy domestic wire maker specifications for Grade 1080 and higher TC/TB/WR.

- 2. But they're basically shifting from buying from China to buying from the subject countries? Tr. 66.**

ANSWER: Chinese producers do not make Grade 1080 and higher TC/TB/WR to the best of POSCO's knowledge. However, the record shows that domestic producers have not been adversely affected by either subject imports or non-subject imports since their aggregate market share [] throughout the POI. See Preh. Rept. at Table C-3a.

- 3. So I'd like to go back to the like product argument with regard to 1080 tire cord and tire bead. So it's my understanding that in 2002, there was a scope exclusion in the wire rod case for this product and that in 2014, it was not excluded, but I don't believe anyone raised a like product argument in that case. So my question is what has changed since 2002? Tr. 103.**

ANSWER: Please see the answer above to question no. 2 from Vice Chairman Johanson. It is correct that no one raised a like product argument in the 2014 investigation of Chinese CASWR imports.

- 4. So were they making it and was the domestic industry making it in 2002? Tr. 104.**

ANSWER: In their remarks that preceded this question, the petitioners suggested that the Chinese were making Grade 1080 and higher TC/TB/WR and that, unlike the 1997 and 2002 investigations, they intentionally included this product within the scope of the Chinese investigation and within the scope of the current investigation: "So when the case was going to be brought against China and this one, the question is should we grant exclusions? And the answer is no, we want to make this product." Tr. 104 (Rosenthal). But, to the best of POSCO's knowledge, there is no evidence in the record of the Chinese investigation or in this investigation that any Chinese producer made Grade 1080 and higher TC/TB/WR. See also Preh. Rept. at Table C-3a, which lists the imports from every country during the current POI.

Moreover, the domestic industry was not making Grade 1080 and higher TC/TB/WR in 2002, which is what the Commission later found in its 2006 investigation of imports from China, Germany, and Turkey. See USITC Pub. 3832 at 9, fn. 34: “Petitioners report that the domestic industry does not currently produce the 1080 and 1090 grades of tire cord quality rod.”

Petitioners have also acknowledged that the domestic industry still does not make 1080 Grade tire cord, although the only reason it does not do so is the low subject import prices:

They don't make the tire cord. And the question is can they justify the investment, the additional investment to make the 1080 tire cord? And the concern has been if you grant an exemption, you'll never get a customer to work with you because they can get the cheap product. Even though you want to - we want to make it, we won't have an economic incentive by the customers to buy it. That - it's a simple problem. It's not like this is rocket science, if you will. It's not that hard - I mean, it's harder to make than the 1080 bead, but it's all a matter of economics. If you can't get the price, you can't justify the investment to make this 1080 cord on a commercial level. Tr. 104-105 (Rosenthal).

The fatal flaw in this argument is that there is no evidence to support their contention that subject imports of Grade 1080 TC/TB/WR are “cheap.” There is also no evidence that subject imports have denied the domestic industry an economic incentive to produce tire cord. In fact, the record points in the opposite direction because the domestic industry did not experience any unfair trade since 1997 since: (a) the Commission reached a negative injury determination in the 1997 investigations; (b) the Commission protected against dumping and subsidies from eight countries in its 2002 investigation; (c) the Commission found in its 2006 investigation that domestic industry prices were high and profits were strong; and (d) the Commission protected against Chinese dumping and subsidies in its 2014 investigation. Under these circumstances, the domestic industry’s claim that it has been prevented for 20 years from making the needed investments, whatever they may be, is exposed as a mere excuse, unsupported by the record.

5. So we did collect separate data for tire cord and bead. If we were to find a separate like product, do you think the record is there to go affirmative on it, given the non-subject in the market? Tr. 105.

If we were to split the products and find that there is a separate like product for tire cord and bead, based on the data that we collected, and the fact that non-subject gained market share in that market, U.S. lost, but so did subject, do you think the record would support an affirmative determination if we were to find separate like products? Tr. 105.

ANSWER: The record does not support an affirmative determination if the Commission (correctly) decides to treat TC/TB/WR as a separate like product. POSCO briefly summarized the reasons why the record overwhelmingly supports a negative determination in its Prehearing Brief (at 31-35). In more detail, those reasons include the following:

- Domestic producer commercial shipments of “all grades” of tire cord and tire bead wire rod constituted just [] of all domestic producer shipments in 2016. Preh. Rept. at IV-17 through IV-18 (Table IV-9).
- For this reason, petitioners testified that, “that product represents a tiny part of the market and a tiny percentage {of} increased volumes of subject imports. . . . we want you, as you listen to that testimony, to understand the relatively small portion of the market that 1080 tire cord and bead represents in this industry and imports overall. . . . As you look at that 700,000 tons of imports that came in from the subject imports, understand how minuscule a proportion of that import surge was represented by 1080 tire cord and bead.” Tr. 40 (Rosenthal).
- Contrary to the petitioners’ claim that TC/TB/WR accounted for even a “minuscule” proportion of the alleged import surge, the record shows that subject imports of TC/TB/WR [

] Thus, there is no evidence of any “import surge” by subject TC/TB/WR. Preh. Rept. at C-6 through C-7 (Table C-3a).

- Domestic industry production capacity [] throughout the POI. Id.
- Domestic industry production volume [

Interim periods. Id.] of market share between the

- The domestic producer inventory level at the end of Interim 2017 was [] Id.
- Although the domestic industry's unit value of commercial shipments [] Id.
- The domestic industry producing TC/TB/WR, at its peak in 2014, employed [] which further indicates the lack of interest or importance of TC/TB/WR to that industry and which also helps to illustrate why subject imports cannot cause material injury or threaten it in the imminent future. An examination of the other labor and employment indicators strongly supports the same conclusion. Id.
- The domestic industry's capital expenditures []
- There is no evidence of any underselling by subject imports of TC/TB/WR. This is not surprising in light of the hearing testimony of two major wire producers, Kiswire and Bekaert, that no domestic producer can produce Grade 1080 and higher tire cord wire rod. Tr. 164 (Minnick); Tr. 162 (Hughes).
- The commercial shipment price of subject imports of TC/TB/WR in 2016 was [] This evidence completely refutes the domestic industry's claim at the hearing that low prices of subject TC/TB/WR prevented the domestic industry from making the necessary investments to produce tire cord wire rod.²⁰
- There is no evidence of lost sales or lost revenues attributable to subject imports of TC/TB/WR, nor could there be in light of the documented inability of domestic producers to produce anything [] of tire bead wire rod (but not tire cord wire rod).
- The domestic industry's COGS/sales ratio []

²⁰ In the absence of any Pricing Product information on TC/TB/WR (which POSCO and Kiswire both asked to be collected in their comments on the draft questionnaires), the commercial shipment values for subject imports and domestic industry sales are the best evidence, indeed the only evidence, pertaining to the issues of underselling, price suppression, price suppression, lost sales, and lost revenues. As such, it fully supports the respondents' position as to the lack of injury from subject imports of TC/TB/WR.

] See

comparison of commercial shipment AUVs in Section III of the text of POSCO's accompanying Posthearing Brief.

- The only possible indicator of material injury by reason of subject imports of TC/TB/WR is the [] reported by Keystone and Evraz during each period of the POI. Preh. Rept. at C-7 (Table C-3a). However, it is not possible that any of these [] are attributable to subject imports of Grade 1080 and higher tire cord wire rod since the domestic industry does not produce this product in commercial quantities. In addition, since [

] it virtually impossible that the losses were attributable to either the volume or prices of subject imports. Finally, it is clear that the prices of domestic-origin TC/TB/WR directly reflect changes in the price of scrap as, the following table shows.

	2014	2015	2016	Interim 2017
Unit price (\$/ST)	[]			
COGS (\$/ST)	[]			

Source: Prehearing Report at C-7 (Table C-3a).

Clearly, domestic producers [] from their dependence on scrap and any additional direct reduced iron that they must use to produce TC/TB/WR. In contrast, since foreign BOF producers do not depend on scrap as their raw material, they are insulated from volatility in scrap prices. Instead, they rely on iron ore and coking coal.

- There is also no basis for an affirmative threat finding because: (a) subject import prices [] domestic industry prices; (b) subject producers devote the vast majority of their production to serving their home markets and third country markets (Preh. Rept. at Table E-6); and (c) the aggregate ending inventory quantity of subject producers on September 30, 2017 [] compared to the level on September 20, 2016.

Petitioners acted surprised at the hearing that the Commission would even inquire about the record pertaining to the injurious effects, if any, of a separate like product determination for Grade 1080 and higher TC/TB/WR. Tr. 106 (Rosenthal and Price). More likely, this surprise was feigned because of their own prior conclusion that the record does not support an affirmative injury determination for the separate TC/TB/WR like product.

6. Can you respond to the argument from the respondents that the specifications have become more stringent for this over time? Tr. 106-107.

ANSWER: The importance of Grade 1080 and higher TC/TB/WR is demonstrated by the fact that, during the POI, POSCO produced [] of all grades of TC/TB/WR, and it produced [] of Grade 1080 and higher TC/TB/WR. See answers to question nos. II-10 and III-1 in POSCO's foreign producers' questionnaire response. Thus, Grade 1080 and higher constituted over [] of POSCO's total production of TC/TB/WR during the POI. These are important new facts.

Moreover, in Interim 2017, POSCO's production of the Grade 1080 and higher TC/TB/WR products exceeded [] of its total TC/TB/WR production. Id. These high percentages alone demonstrate the much stronger current demand for the higher grade TC/TB/WR products that have more stringent specifications, and they further illustrate the clear dividing line that domestic producers have been unable to cross.

7. So if that's the case and imports are being pulled into the market, why do we see so much underselling? Tr. 188.

ANSWER: Insofar as Grade 1080 and higher TC/TB/WR is concerned, there is no evidence of underselling, and the domestic industry has yet to identify any such evidence. Instead, their "evidence" consists solely of broad and vague claims of "cheap" imports. That does not meet the evidentiary standard for a determination that subject imports had adverse price effects.

8. But a lot of purchasers that were surveyed said that they bought because of low prices. Tr. 208.

ANSWER: Insofar as Grade 1080 and higher TC/TB/WR is concerned, no purchaser has reported that it bought subject imports because of low prices. Rather, purchasers bought subject imports due to unavailability from domestic producers.

9. **It appears that cumulated subject import volume declined after the filing of the Petitions. Was this decline in subject import volume attributable to the pendency of the investigations? Tr. 233.**

ANSWER: Insofar as Grade 1080 and higher TC/TB/WR is concerned, the decline in subject import volume after the filing of the petition was not attributable to the pendency of the investigations. Rather, it was attributable to the significant decline in apparent consumption between Interim 2016 and Interim 2017. Table C-3a shows that apparent consumption in January-September 2016 [

]

If the pendency of the investigations was the cause of this decline (which it could not have been for non-subject imports), then the domestic industry [

]

Questions of Commissioner Williamson

1. **I was just wondering, how useful is the data in Table VI-3 for our analysis, given the fact that ArcelorMittal's data is not in the data set after 2015 and Republic is not in there at all. Tr. 90.**

ANSWER: We respectfully refer Commissioner Williamson to the data in Table C-3a, which is specific to Grade 1080 and higher TC/TB/WR. Insofar as ArcelorMittal is concerned, that company reported in its questionnaire response that [

] Therefore, there is no “survivor bias” in the data in Table C-3a, unlike what the petitioners claimed with respect to the data pertaining to all CASWR products that is compiled in Table VI-3. Tr. 90 (Cannon).

2. **Let me turn to wire rod for tire cord and bead. Can other grades below 1080 be used for tire cord and tire bead? Tr. 91.**

ANSWER: Yes, Grade 1070 and below can be used to make tire cord wire rod and tire bead wire rod. However, the trend in the tire industry is strongly towards Grade 1080 and higher:

The thing is is right now, every time the tire industry they want a better wire, a lighter tire, we have to produce this wire stronger, they've gone from back then of where they ran what they call normal tensile wire as the tensile strength. They went to a high tensile {strength}. They went to a super tensile {strength}. They're now at an ultra-high tensile {strength}. Every time they increase the tensile {strength}, we have to increase the carbon in the rod that we use. So we're now from using 70 back then to using 80, 85 and 90. In some cases, we're using 85 with chromium, which even makes it harder. Tr. 218-219 (Minnick).

Further proof of this trend is shown in POSCO's foreign producers' questionnaire response, which shows that [] of POSCO's production of TC/TB/WR during the POI consisted of Grade 1080 and higher. See answers to question nos. II-10 and III-1. Specifically, during the POI, POSCO has reported that it produced a total of [

] ²¹

²¹ Nucor incorrectly claimed that the Commission's “data set” did not include information on the relative volumes of Grade 1080 and higher TC/TB/WR as a percentage of all TC/TB/WR. Tr. 92 (Price).

3. **Does anybody have any idea of what share of the - what is their relative share {of Grade 1080 and higher TC/TB/WR as a percentage of all TC/TB/WR}? Tr. 91.**

ANSWER: Please see answer to the previous question.

4. **What uses determine the grade of tire or bead? And {are} there any production equipment adjustments needed to make tire cord and tire bead wire rod? Tr. 92.**

ANSWER: As to the grade of tire bead or tire cord that is required, please see the testimony of Kiswire's witness that POSCO has quoted in its answer to Commissioner Williamson's question no. 2 above. The direct answer is that tire makers specify the strength of the steel wire that they need for each of their tires.

As to the "production equipment adjustments needed to make tire cord and tire bead wire rod," the first answer is that the primary requirement is the "cleanest" possible steel, i.e. steel with a minimum content of impurities and chemical elements that impede drawing of wire rod into extraordinarily thin wire. Such steel is produced in a basic oxygen furnace, which is why no domestic producer has yet to be able to produce Grade 1080 and higher tire cord wire rod using billets made in an EAF.

In their answer to this question at the hearing, Nucor insisted that no production equipment adjustments are needed:

{F}rom the wire rod producers' standpoint, tire bead and tire cord are made on the same equipment. It's the same type of rolling mill, same type of melt shops. It can be EAF, it can be a BOF shop, so it's just a different product among many products that we make that are wire rod. Tr. 92-93 (Nystrom).

If this is true, then the Commission should wonder why Nucor failed to explain why it remains unable to produce Grade 1080 and higher tire cord wire rod. But, Nucor then, perhaps inadvertently, acknowledged the difference between producing tire cord and tire bead: "the

In fact, the relative volumes can be precisely determined by comparing the reported production volume of all grades of TC/TB/WR to the reported production volume of Grade 1080 and higher TC/TB/WR. See, e.g., Foreign Producers' questionnaire at question nos. II-10 and III-1.

differences between the bead and the cord, I'm not the expert on the comment there.” Tr. 93 (Nystrom). It is most certainly true that Nucor is not an “expert” on producing tire cord, despite its effort to convince the Commission that it is not difficult. In contrast, POSCO, a world class wire rod producer, took five years to master the production technology. Tr. 166 (Rhee).

More accurate information was provided by [

] See Preh. Rept. at

D-4 (Table D-1).

5. **I was wondering, do differences between the EAF and BOF production processes impact the requirements that in - by end users. In other words, do your end users say, you gotta make it by this process or by that process? Tr. 93.**

ANSWER: The responses of purchasers in their questionnaires unanimously state that they require steel wire rod that has been produced using steel billets produced in a BOF. See Table D-2 in Prehearing Report, which contains the Comments of [

] These Comments provide an extremely detailed set of explanations of the reasons why the most significant purchasers of Grade 1080 and higher TC/TB/WR insist on wire rod produced in a BOF. We urge the Commission to review all of the comments in Table D-2 for a thorough understanding of the importance of BOF steel to Grade 1080 and higher production.

6. **Just a couple of quick questions on the tire cord and tire bead. Do any of your firms source billets from BOF, from the BOF process to produce wire rod, and how often do you buy billets for wire rod, particularly for the 1080 or other grades? Tr. 118.**

ANSWER: To the best of POSCO’s knowledge, no domestic producer can produce Grade 1080 tire cord wire rod. However, to do so, BOF billets would be required. Nucor admitted that it was only able to make its first shipment of tire bead wire rod by using billets produced in a BOF.

Tr. 46 (Nystrom). Nucor further suggested that this is currently the only way for any domestic producer to produce Grade 1080 and higher material: “wire rod for tire applications can be rolled in the United States by purchasing billets from a BOF producer.” Id.

Similarly, Kiswire testified that, despite inferior production techniques, domestic producers “have been unable to consistently produce grade 1080 in the quality and quantity required and then they have done so using BOF billets.” Tr. 164 (Minnick). Evraz, in particular, has used imported BOF billets to produce limited quantities of grade 1080 wire rod for tire cord.” Tr. 165 (Minnick). Bekaert’s witness similarly testified that, “Nobody at this time is making 1080 steel tire cord for an electric furnace for us, no. Tr. 203 (Hughes).

- 7. Are any U.S. producers currently pursuing certifications or capabilities to produce tire cord of a quality greater than the 1080 grade, and again that might be a post-hearing one too. And then Table 1-8 shows U.S. production of grade 1080 and higher. Do we know if this production involved any electric arc furnaces? So I'm asking not what you're capable of, but what's actually happening. Tr. 119.**

ANSWER: To the best of POSCO’s knowledge, no U.S. producer is certified or qualified to sell Grade 1080 and higher tire cord wire rod to a U.S. wire maker. See discussion in POSCO’s Prehearing Brief (at 11-19) concerning what domestic purchasers have reported on this subject. We await the response of the petitioners and the remainder of the domestic industry as to their actual efforts to pursue certification or qualification, and the Commission should expect a full accounting of every instance in which a domestic producer has tried, but failed to obtain certification or qualification. The testimony and questionnaire responses of the most significant wire producers uniformly indicate that domestic producers cannot meet their rigorous specifications.

Insofar as Table I-8 is concerned, [

] Evraz's website states that the highest carbon content of its wire rod is 0.8%. Therefore, it cannot produce any of the higher grades of TC/TB/WR that are now much more in demand by wire makers and tire makers.

- 8. One last quick question. Mr. Nystrom you talked about -- when you were talking about tire cord and tire bead, I think you made a distinction between what people might produce, and I wasn't sure if that was of any significance. Is the same thing, same company that produces the tire cord going to produce the tire bead too or -- there may not be a distinction that is worth talking about. Tr. 126-127.**

ANSWER: Production of Grade 1080 and higher tire cord wire rod is much more difficult than production of Grade 1080 tire bead wire rod. That is why the petitioners acknowledged that they can produce tire bead, but not tire cord. Tr. 104-105 (Rosenthal). The difficulty exists because the wire used in tire bead is not nearly as thin as the wire used in tire cord. The need to draw the wire to much thinner dimensions puts a premium on minimization of all of the factors that can contribute to breakage and tearing during the wire drawing process as well as fatigue failures that can occur once the wire is woven into the mesh that is inserted into the tires.

- 9. They do say this morning, they could - now whether anybody's actually doing it - they use the electric arc furnaces to make 1080 if you have different inputs, the DRI or - is that -- do you agree with that? Tr. 203.**

ANSWER: As described in previous answers, the consistent testimony of the wire producers was that no domestic producer is now able to produce Grade 1080 and higher tire cord wire rod using EAF billets. It appears possible to make Grade 1080 and higher tire bead wire rod in an EAF by using BOF billets.

- 10. This morning, petitioners were asked about purchasers need for multiple sources. They noted that there are seven domestic producers and nonsubject import sources. So the petitioners argue that purchasers buy subject imports because they are cheaper. So how do you respond to that? I know someone has already talked about the need for alternative sources, but aren't there alternative sources in the U.S.? Tr. 204-205.**

ANSWER: Please see the discussion of multiple sourcing in the text of POSCO's accompanying Posthearing Brief, as well as POSCO's answer above to question no. 1 of Commissioner Broadbent.

11. Just to follow up on that last question, can electric arc, can they use reduced iron instead of scrap? And does that address does that - does that make the soup a little bit more predictable or? Tr. 223.

ANSWER: Direct reduced iron can be used in an EAF in an effort to improve the "cleanliness" of the steel. However, the use of DRI in an EAF is a production technique that has been known for many years. If all that domestic producers needed to do was to increase their use of DRI in order to produce Grade 1080 and higher TC/TB/WR, then they would have done so long ago. Moreover, the use of DRI is logistically difficult and adds significant costs, as Mr. Hughes testified: "that creates a tremendous amount of cost, because they have to make it in one factory, ship it to another, and the amount to take out the impurities from the scrap, it might be 50 or 60 percent where currently, they're using maybe 10 percent." Tr. 223.

12. And so if we find that the domestic producers do not produce grade 1080 tire cord and tire bead wire rod, how should the - how should that affect the Commission's domestic like product analysis? Tr. 225.

ANSWER: The record shows that a limited number of domestic producers actually can produce Grade 1080 (but no higher) tire bead wire rod. However, there is no evidence that they can do so using billets made in an EAF. Rather, they depend on BOF billets. In addition, they cannot produce Grade 1080 and higher tire cord. The inability to make these products helps to establish the clear dividing line that is required for a separate like product finding. And, this inability, along with many other factors, helps to satisfy the Commission's traditional six factor test for establishing a separate like product.

13. For tire cord producers again, are there specific load {sic} bearing thresholds that are separate tire cord - that separate tire cord grades? If so, could you please share documents demonstrating and for what loads {sic} requires specific grades of tire cord? Tr. 227.

ANSWER: Please see answer of Kiswire to this question.

14. Okay, how do the changes in the automotive industry affect the wire rod market? I guess changes in demand in tires, but any other changes? Tr. 229.

ANSWER: Kiswire's witness provided a succinct answer to this question:

I think what you're asking is this. You know, I have an old '97 pickup truck that I've had now for since brand new. The largest tire that would be put on that was a 15 inch tire. Today, everything you buy is 20, 21, 22 inch tires. So the industry has gone from making 13, 14, 15 inch tires to making 18, 19, 20, 21, 22 inch tires up to 24 inch for cars. So that has been a big factor in the change of what kind of bead wire, what type of tire cord they wanted. And it also has changed the strength of it because they want a lighter tire. So that you make the wire a lot stronger. They don't have to put as much wire in each tire. Tr. 229 (Minnick).

Confirming evidence of the vastly increasing importance of larger tires is provided in Exhibit 2.

15. It appears that cumulative subject import volume declined after the filing of the Petition. Was this decline of subject import volume attributed to the pendency of the investigation and if it has already been asked just tell me. Tr. 237.

ANSWER: Please see answer to question no. 9 of Commissioner Broadbent.

EXHIBIT LIST

<u>Number</u>	<u>Description</u>
1	Revised DOC preliminary determination for POSCO (public)
2	Excerpts from Modern Tire Dealer 2017 fact book (public)
3	Excerpt from ArcelorMittal Brazil website (public)
4	Excerpts from British Steel website (public)
5	POSCO internal study of BOF v. EAF for tire cord (APO)
6	POSCO earnings releases for 2016 and 3Q 2017 (public)
7	Articles re auto worker strikes in Korea (public)
8	Excerpts from UK tire industry Factbook (public)

EXHIBIT 1

BILLING CODE: 3510-DS-P

DEPARTMENT OF COMMERCE

INTERNATIONAL TRADE ADMINISTRATION

A-580-891

Carbon and Alloy Steel Wire Rod From the Republic of Korea: Amended Preliminary Determination of Sales at Less Than Fair Value

AGENCY: Enforcement and Compliance, International Trade Administration, Department of Commerce

SUMMARY: On October 31, 2017, the Department of Commerce (Department) published in the *Federal Register* the *Preliminary Determination*¹ of the antidumping duty investigation of carbon and alloy steel wire rod (wire rod) from the Republic of Korea (Korea). The Department is amending the *Preliminary Determination* of the investigation to correct a significant ministerial error.

DATES: Effective [Insert date of publication in the *Federal Register*.]

FOR FURTHER INFORMATION CONTACT: Lingjun Wang, AD/CVD Operations, Office VII, Enforcement and Compliance, International Trade Administration, U.S. Department of Commerce, 1401 Constitution Avenue, NW, Washington, DC 20230; telephone: (202) 482-2316.

¹ See *Carbon and Alloy Steel Wire Rod from the Republic of Korea: Preliminary Affirmative Determination of Sales at Less Than Fair Value, and Preliminary Negative Determination of Critical Circumstances*, 82 FR 50386 (October 31, 2017) (*Preliminary Determination*); see also the petitioners' November 1, 2017 letter, "Petitioners' Ministerial Error Allegations Concerning POSCO" (Ministerial Error Allegation).

SUPPLEMENTARY INFORMATION:

Background

On October 31, 2017, the Department published in the *Federal Register* the *Preliminary Determination* of wire rod from Korea. On November 1, 2017, Gerdau Ameristeel US Inc., Keystone Consolidated Industries, Inc., and Charter Steel (collectively, the petitioners) alleged that the Department made a significant ministerial error in the *Preliminary Determination*.

Scope of the Investigation

The product covered by this investigation is wire rod from Korea. For a full description of the scope of this investigation, *see* the “Scope of the Investigation,” in the Appendix to this notice.

Significant Ministerial Error

A ministerial error is defined in 19 CFR 351.224(f) as “an error in addition, subtraction, or other arithmetic function, clerical error resulting from inaccurate copying, duplication, or the like, and any other similar type of unintentional error which the Secretary considers ministerial.” A significant ministerial error is defined in 19 CFR 351.224(g) as a ministerial error, the correction of which, singly or in combination with other errors, would result in: (1) a change of at least five absolute percentage points in, but not less than 25 percent of, the weighted-average dumping margin calculated in the original (erroneous) preliminary determination; or (2) a difference between a weighted-average dumping margin of zero or *de minimis* and a weighted-average dumping margin of greater than *de minimis* or vice versa. Further, 19 CFR 351.224(e) provides that the Department “will analyze any comments received and, if appropriate, correct any significant ministerial error by amending the preliminary determination.”

Ministerial Error Allegation

The petitioners allege that the Department failed to convert the product matching control number (CONNUM)-specific per-unit import duty cost amounts that were denominated in Korean won to U.S. dollars when it granted POSCO a duty drawback adjustment to U.S. price.² The petitioners also maintain that correcting this error results in an increase of more than five absolute percentage points in, but not less than 25 percent of, the weighted-average dumping margin, thereby meeting the definition of “significant” pursuant to 19 CFR 351.224(g)(1).³

We agree with the petitioners’ allegation. The CONNUM-specific per-unit duty cost amount that forms the basis of our duty-drawback adjustment was in Korean won.⁴ The Department inadvertently failed to convert CONNUM-specific per-unit duty cost amount to U.S. dollars when adjusting U.S. price in the margin calculation program.⁵ This error constitutes a ministerial error within the meaning of 19 CFR 351.224(f).⁶ Moreover, correcting this ministerial error changes the margin from 10.09 percent to 40.80 percent, thereby making this error significant pursuant to 19 CFR 351.224(g)(1).⁷

Amended Preliminary Determination

We are amending the preliminary determination of sales at less-than-fair-value for wire rod from Korea to reflect the correction of a ministerial error made in the margin calculation for

² See DOC October 24, 2014 Memorandum: “Cost of Production and Constructed Value Calculation Adjustments for the Preliminary Determination – POSCO,” and DOC October 24, 2014 Memorandum “Preliminary Determination Margin Calculation for POSCO.”

³ See Ministerial Error Allegation.

⁴ See POSCO August 23, 2017 Response to Supplemental Section D Questionnaire at SD-12 and Exhibit SD-10, and POSCO October 11, 2017 Response to Second Supplemental Section D Questionnaire at SD2-6 and Exhibit SD2-7.

⁵ See DOC October 24, 2017 Memorandum: “Cost of Production and Constructed Value Calculation Adjustments for the Preliminary Determination – POSCO” at 4, and DOC October 24, 2017 Memorandum: “Preliminary Determination Margin Calculation for POSCO” at 5.

⁶ See DOC Memorandum: “Allegation and Analysis of Ministerial Error in the Preliminary Determination,” dated concurrently with this memorandum (Ministerial Error Analysis Memorandum).

⁷ See DOC Memorandum: “Amended Preliminary Determination Margin Calculation for POSCO,” dated concurrently with this memorandum (Amended Preliminary Calculation Memorandum).

POSCO. In addition, because the preliminary “All-Others” rate was based on the estimated weighted-average dumping margin calculated for POSCO, we are also amending the “All-Others” rate. As a result of the correction of the ministerial error, the revised weighted-average dumping margins are as follows:

Exporter/Manufacturer	Weighted-Average Dumping Margin (percent)
POSCO	40.80
All-Others	40.80

Amended Cash Deposits and Suspension of Liquidation

The collection of cash deposits and suspension of liquidation will be revised according to the rates established in this amended preliminary determination, in accordance with section 733(d) and (f) of the Tariff Act of 1930, as amended (the Act) and 19 CFR 351.224. Because the rates are increasing from the *Preliminary Determination*, the amended cash deposit rates will be effective on the date of publication of this notice in the *Federal Register*.

International Trade Commission Notification

In accordance with section 733(f) of the Act, we notified the International Trade Commission of our amended preliminary determination.

Disclosure

We intend to disclose the calculations performed to parties in this proceeding within five days after public announcement of the amended preliminary determination, in accordance with 19 CFR 351.224.

This amended preliminary determination is issued and published in accordance with sections 733(f) and 777(i) of the Act and 19 CFR 351.224(e).

/S/ Gary Taverman

Gary Taverman
Deputy Assistant Secretary
for Antidumping and Countervailing Duty Operations
performing the non-exclusive functions and duties of the
Assistant Secretary for Enforcement and Compliance

November 20, 2017

Date

Appendix

Scope of the Investigation

The products covered by this investigation are certain hot-rolled products of carbon steel and alloy steel, in coils, of approximately round cross section, less than 19.00 mm in actual solid cross-sectional diameter. Specifically excluded are steel products possessing the above-noted physical characteristics and meeting the Harmonized Tariff Schedule of the United States (HTSUS) definitions for (a) stainless steel; (b) tool steel; (c) high-nickel steel; (d) ball bearing steel; or (e) concrete reinforcing bars and rods. Also excluded are free cutting steel (also known as free machining steel) products (*i.e.*, products that contain by weight one or more of the following elements: 0.1 percent or more of lead, 0.05 percent or more of bismuth, 0.08 percent or more of sulfur, more than 0.04 percent of phosphorous, more than 0.05 percent of selenium, or more than 0.01 percent of tellurium). All products meeting the physical description of subject merchandise that are not specifically excluded are included in this scope.

The products under investigation are currently classifiable under subheadings 7213.91.3011, 7213.91.3015, 7213.91.3020, 7213.91.3093; 7213.91.4500, 7213.91.6000, 7213.99.0030, 7227.20.0030, 7227.20.0080, 7227.90.6010, 7227.90.6020, 7227.90.6030, and 7227.90.6035 of the HTSUS. Products entered under subheadings 7213.99.0090 and 7227.90.6090 of the HTSUS also may be included in this scope if they meet the physical description of subject merchandise above. Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the scope of this proceeding is dispositive.

EXHIBIT 2

What to expect in 2017

Despite mixed signals, there is a lot to be optimistic about

By Bob Ulrich

Even before the 2016 presidential election was over, there were signs 2017 might be a good one for the automotive industry. According to the NPD Group's Holiday Purchase Intentions report, Donald Trump supporters were almost twice as likely to say they planned to spend more on automotive products in 2016 than Hillary Clinton supporters.

What will actually happen when Trump becomes president is unknown, although he clearly favors conservative policies. But there are other sources that will give you insight into what will affect your business in 2017.

Nathan Shipley, director of U.S. automotive industry analysis at the NPD Group, says the combination of declining retail prices in 2016 and a slowdown in miles driven growth are pointing to a decline in retail sales in 2017.

At the Automotive Aftermarket Products Expo's 2017 Aftermarket Outlook session in November, he shared results from NPD's 2017 Consumer Outlook Survey with attendees. "Our forecast for 2017 is that our industry is going to shrink a bit. It's going to decline 1.9%."

Shipley sees ride-sharing, car-sharing services and autonomous vehicles as "industry disruptors" further down the road.

There also are some positive signs. Through September 2016, vehicle miles driven was on a record pace: close to 3.2 trillion miles, even though the 3% growth rate reportedly decreased as the year wound down. Entering the year, AAA's average price for a gallon of gasoline was \$2.34. That's higher than last year at this time, but still more than \$1 a gallon less than the 2014 average, a year in which total miles driven still outpaced the previous year.

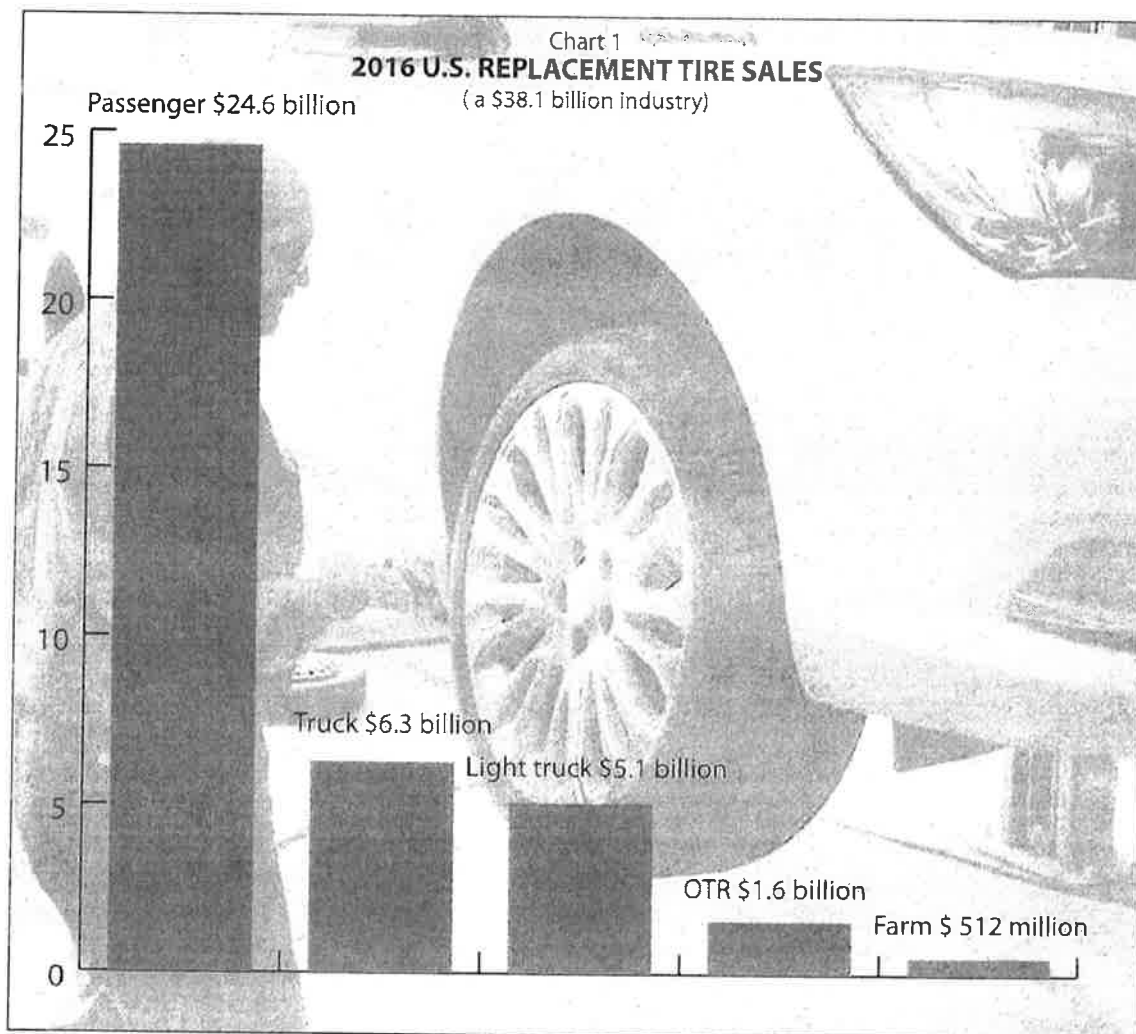
NPD research indicates do-it-for-me oil change service has taken two share points from the do-it-yourself consumer market segment.

Nick Mitchell, senior vice president of research for Northcoast Research Holdings LLC, says the drive toward high-value-added (HVA) tires — those 17 inches and larger — will require more production capacity to serve the U.S. market. "Approximately four new tire plants will be needed over the next five years."

Now trending: CUVs, online sales and you

The Ford F-150 was once again the best-selling vehicle in 2016. However, the fastest growing vehicle segment was the CUV segment.

Vehicle registration data compiled by the R.L. Polk Division of



Large rim diameters are the new normal for passenger tire sizes. Defined as 17-inch sizes and above, they represent 56.4% of all 351 sizes. They also are known as high-value-added tires, or HVA for short.

Its \$37.50 Douglas Xtra-Trac II in size 15S/80R13 is no longer available, but the size has not disappeared. It is now known as the Douglas All-Season (\$40.91) on walmart.com. Eight other lines also are available in size 15S/80R13, ranging from the Evergreen EH22 (\$28.70) to the Cooper Trendsetter SE (\$70.95).

Speed	Major	Low Cost Radial	Overall
V-rated	\$157.60	\$90.59	\$140.87
H-rated	\$151.75	\$100.43	\$146.44
T-rated	\$139.78	\$106.86	\$132.24

Source: Tire and Rim Association

Source: Tire & Rim Association

Source: RMA, MTD

Source: RMA, MTD

Source: Modern Tire Dealer statistics

Source for Charts 32-34: Tire Intelligence LLC, www.tire-intelligence.com

Wow, a 4.6% rise in capacity!

Yearly tire capacity, not production, in North America totaled 324.5 million tires in 2016, a whopping 4.6% increase over 2015. And there is more to come; at least 22.3 million more tires will be available by 2023. The majority of the increases were the result of new plants and facility upgrades in the U.S. and Mexico. U.S. capacity rose nearly 5%. None of the four new plants are unionized. Since 2000, 10 consumer tire plants in the U.S. have been closed. Eight of them were union facilities:

- Goodyear: Union City, Tenn. (2011), Tyler, Texas (2008), and Huntsville, Ala. (2003).
- Continental: Charlotte, N.C. (2006), and Mayfield, Ky. (2005).
- Michelin: Opelika, Ala. (2009), and Reno, Nev. (2002).
- Bridgestone: Oklahoma City, Okla. (2006).
- Cooper: Albany, Ga. (2009).
- Pirelli: Hanford, Calif. (2001).

The plants produced an estimated 263,000 passenger and light truck tires a day.



Chart 37

NORTH AMERICAN PLANT CAPACITIES as of Jan. 1, 2017 (in thousands of units)

Plant location/ Year constructed	Non-union	ISO	QS	Pas- senger per day:	Light truck per day:	Truck per day:	Others per day:	Total
Bridgestone Americas Inc.								
Aiken, S.C., 2013	x			0.0	0.0	0.0	0.03	0.03
La Vergne, Tenn., 1972		x	x	0.0	0.0	6.2	0.0	6.2
Warren County, Tenn., 1990		x	x	0.0	0.0	9.0	0.0	9.0
Bloomington, Ill., 1965		x	x	0.0	0.0	0.0	0.29	0.29
Des Moines, Iowa, 1945		x	x	0.0	0.0	0.0	4.57	4.57
Wilson City, N.C., 1974	x	x	x	32.0	0.0	0.0	0.0	32.0
Aiken, S.C., 1999	x	x	x	25.5	10.2	0.0	0.0	35.7
Joliette, Quebec, 1966		x	x	9.3	7.2	0.0	0.0	16.5
Monterrey, Mexico, 2007	x			8.0	0.0	0.0	0.0	8.0
Cuernavaca, Mexico, 1980		x	x	11.0	4.4	0.0	0.0	15.4
Total:				85.8	21.8	15.2	4.89	127.69
American Industrial Partners (formerly Carlisle Tire & Wheel Co.)								
Jackson, Tenn., 2009	x			0.0	0.0	0.0	26.0	26.0
Clinton, Tenn. (Dico), 1974	x	x		0.0	0.0	0.0	15.0	15.0
Total:				0.0	0.0	0.0	41.0	41.0
Continental Tire the Americas LLC								
Sumter, S.C., 2013	x			7.4	2.1	0.0	0.0	9.5
Mount Vernon, Ill., 1973	x	x	x	29.0	4.0	8.0	0.0	41.0
Total:				36.4	6.1	8.0	0.0	50.5
Cooper Tire & Rubber Co.								
Findlay, Ohio, 1917		x		7.0	16.0	0.0	0.0	23.0
Texarkana, Ark., 1964		x		24.0	8.0	0.0	0.0	32.0
Tupelo, Miss., 1984/1960	x	x		42.0	0.0	0.0	0.0	42.0
Total:				73.0	24.0	0.0	0.0	97.0
Goodyear Tire & Rubber Co.								
Danville, Va., 1966		x	x	0.0	0.0	11.0	2.0	13.0
Fayetteville, N.C., 1969		x	x	30.5	10.5	0.0	0.0	41.0
Gadsden, Ala., 1928		x	x	14.5	11.5	0.0	0.0	26.0
Lawton, Okla., 1978	x	x	x	64.0	0.0	0.0	0.0	64.0
Topeka, Kan., 1945		x	x	0.0	0.5	5.5	0.1	6.1
Medicine Hat, Alberta, 1960		x	x	0.0	0.0	0.0	13.0	13.0
Napanee, Ontario, 1990	x	x	x	19.0	0.0	0.0	0.0	19.0
Total:				128.0	22.5	16.5	15.1	182.1
GTY (General/Yokohama)								
Mount Vernon, Ill., 1988	x	x	x	0.0	0.0	3.9	0.0	3.9
Hankook Tire America Corp.								
Clarksville, Tenn., 2016	x			10.0	5.0	0.0	0.0	15.0
Kumho Tire Co. Inc.								
Macon, Ga., 2015	x			8.0	3.0	0.0	0.0	11.0
Michelin North America Inc.								
Ardmore, Okla., 1969	x	x	x	40.5	3.5	0.0	0.0	44.0
Dothan, Ala., 1979	x		x	1.2	4.3	0.0	0.0	5.5
Fort Wayne, Ind., 1961				21.0	9.5	0.0	0.0	30.5
Greenville, S.C., 1975	x		x	28.0	0.0	0.0	0.0	28.0
Greenville, S.C. (C3M), 1997	x	x	x	7.0	0.0	0.0	0.0	7.0
Greenville, S.C. (Twheel), 2014	x			0.0	0.0	0.0	0.07	0.07
Lexington, S.C., 1981	x		x	19.0	5.0	0.0	0.0	24.0
Lexington, S.C., 1998	x	x		0.0	0.0	0.0	0.1	0.1

Plant location/ Year constructed	Non-union	ISO	QS	Pas- senger per day:	Light truck per day:	Truck per day:	Others per day:	Total
Spartanburg, S.C., 1978	x		x	0.0	0.0	7.0	0.0	7.0
Starr, S.C., 2013	x			0.0	0.0	0.0	0.01	0.01
Tuscaloosa, Ala., 1945			x	23.0	7.0	0.0	0.0	30.0
Bridgewater, Nova Scotia, Canada, 1973	x		x	11.0	3.0	0.0	0.0	14.0
Granton, Nova Scotia, 1971	x		x	2.0	0.0	0.0	0.0	2.0
Waterville, Nova Scotia, 1982	x		x	0.0	0.0	4.5	0.5	5.0
Queretaro, Mexico	x			6.0	0.0	0.0	0.0	6.0
Total:				158.7	32.3	11.5	0.68	203.18
Pirelli Tire North America Inc.								
Rome, Ga., (MIRS), 2002	x	x		1.2	0.5	0.0	0.0	1.7
Guanajuato, Mexico, 2011	x			8.0	3.0	0.0	0.0	11.0
Total:				9.2	3.5	0.0	0.0	12.7
Specialty Tires of America Inc.								
Indiana, Pa., 1915	x			0.92	0.18	0.05	2.35	3.5
Unicoi, Tenn., 1997	x			0.3	0.5	0.05	.25	1.1
Total:				1.22	0.68	0.1	2.6	4.6
Sumitomo Rubber USA LLC (Sumitomo Rubber North America Inc.)								
Tonawanda, N.Y., 1923			x	3.0	2.0	2.3	5.0	12.3
Titan Tire Corp.								
Bryan, Ohio, 1967	x	x		0.0	0.0	0.0	0.33	0.33
Des Moines, Iowa, 1943	x			0.0	0.0	0.0	11.25	11.25
Freeport, Ill., 1964	x	x		0.0	0.0	0.0	8.1	8.1
Total:				0.0	0.0	0.0	19.68	19.68
Toyo Tire North America Manufacturing Inc.								
White, Ga., 2005	x	x		8.8	8.8	0.0	0.0	17.6
Trelleborg Wheel Systems								
Spartanburg, S.C., 2015	x			0.0	0.0	0.0	0.06	0.06
Charles City, Iowa, 2012				0.0	0.0	0.0	0.5	0.5
Total:				0.0	0.0	0.0	0.56	0.56
Yokohama Tire Corp.								
West Point, Miss., 2015	x	x	x	0.0	0.0	2.0	0.0	2.0
Salem, Va., 1968				25.7	1.1	0.0	0.0	26.8
Total:				25.7	1.1	2.0	0.0	28.8
Grupo Carso/Euzkadi (Continental AG)								
San Luis Potosi, Mexico				15.0	5.0	0.0	0.0	20.0
JK Tyre & Industries (formerly CIA Hulera Tormel)								
Mexico City, Mexico				0.0	1.0	1.0	0.14	2.14
Tultitlan, Mexico				7.0	1.5	0.5	0.0	9.0
Tacuba, Mexico				8.0	2.5	0.0	0.0	10.5
Total:				15.0	5.0	1.5	0.14	21.64
Corporacion de Occidente SA de CV (Cooper Tire)								
Guadalajara, Mexico, 2005	x	x	x	10.0	7.2	2.8	0.0	20.0
U.S. totals:				473.52	113.18	55.0	76.01	717.71
Canadian totals:				41.3	10.2	4.5	13.5	69.5
Mexican totals:				73.0	24.6	4.3	0.14	102.04
TOTAL:				587.82	147.98	63.8	89.65	889.25

Chart 38
PLANT UNIONIZATION
BREAKDOWN

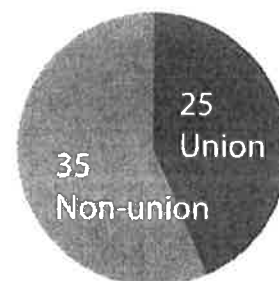


Chart 39
ADDITIONAL CONSUMER
TIRE CAPACITY
TARGET DATES

Goodyear Tire & Rubber Co.
New plant: San Luis Potosi, Mexico
Cost: \$550 million
Completion date: Not specified
Annual capacity: 6 million

Giti Tire (USA) Ltd.
New plant: Chester County, S.C.
Cost: \$560 million
Completion date: Not specified
Annual capacity: 5 million

Michelin North America
New plant: Leon, Mexico
Cost: \$510 million
Completion date: 4Q 2018
Annual capacity: 4-5 million

Pirelli Tire North America
New plant: Silao, Mexico
Cost: \$200 million
Completion date: By 2019
Annual capacity: 2.5 million

Sumitomo Rubber USA
Plant: Tonawanda, N.Y.
Cost: \$87 million
Completion date: By 2020
Annual addl. capacity: 1.8 million

Bridgestone Americas
Plant: Wilson, N.C.
Cost: \$344 million
Completion date: By 2018
Annual addl. capacity: 1 million

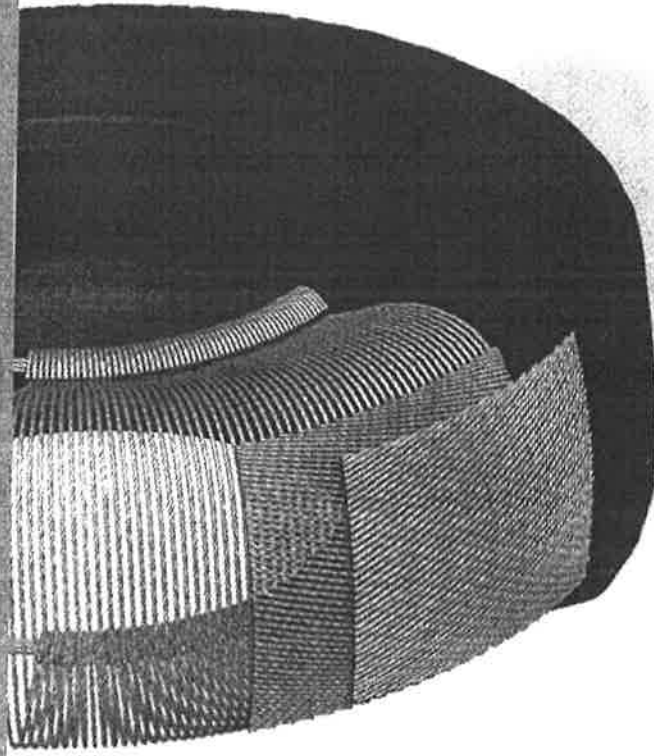
Plant: Joliette, Quebec
Cost: \$250 million
Completion date: By 2023
Annual addl. capacity: 1 million

Added capacity: up to 22.3 million

EXHIBIT 3

Wire Rod for Steel Cord

Alambrón
para Steel Cord



Steel Cord / Bead Wire / Hose Wire / Sawing Wire

International Code	Steel	% C	% Cr	% Mn	% P + % S	% Si	TS (MPa) typical values at 5,50 mm
SAE 1070 / SWRS 72 A	NT/1070	0,70 - 0,75	0,005 max.	0,45 - 0,55	0,025 max.	0,15 - 0,30	1000
SAE 1080 / SWRS 82 A	HT/1080	0,80 - 0,84	0,005 max.	0,45 - 0,55	0,025 max.	0,15 - 0,30	1100
SAE 1090 / SWRS 92 A	UT/1090	0,89 - 0,94	0,005 max.	0,45 - 0,55	0,025 max.	0,15 - 0,30	1250
SWRS 92 A mod.	UT/1092	0,89 - 0,94	0,20 - 0,30	0,30 - 0,50	0,025 - max.	0,15 - 0,30	1280

Sizes available (mm) / Medidas disponibles (mm): 5,50 and 4,75 upon request. Other specifications, upon request. Otras especificaciones, bajo consulta.

EXHIBIT 4

British Steel is constantly working to develop new grades of steel with enhanced properties to meet the most stringent quality requirements.



We produce high-strength steel to meet the demands of the global tyre industry striving to manufacture lighter and more durable tyres and improve fuel economy and vehicle performance.

Our focus on customer specifications

Our tyre reinforcement cord is manufactured to meet individual customer specifications. Tensile strength is altered by adapting the steel microstructure, while scale characteristics can be tailored to suit each customer's preferred descaling method. This ensures we deliver a steel solution that meets your exact needs, drawing on our application knowledge and material development expertise.

Rigorous testing for quality assurance

The quality of our products is assured by rigorous testing procedures conducted in well-equipped laboratories to verify stringent criteria such as segregation, steel cleanliness, scale, surface quality, decarburisation, chemical composition, size, shape and tensile strength properties. Our products meet the required standards for the most challenging and safety-critical applications.

British Steel is accredited to both ISO 9001:2015 for our quality management system and ISO 14001:2004 for our environmental management system.

Delivering quality

Despatch of wire rod coils through our purpose-built wire rod service centre or Automated Coil Warehouse allows British Steel to offer an efficient delivery service. These streamlined despatch facilities are equipped with bespoke handling equipment which, combined with minimal handling and an anti-abrasive flooring system, minimises storage and handling damage.

Technical support from our specialists

Our team of experienced metallurgists provide dedicated technical support to our customers, including selection of the most appropriate steel grade and size, detailed metallurgical analysis to solve specific processing problems, and the development of new and more advanced grades of steel for increasingly demanding applications.

Wire rod dimensions

Rod diameter	5.5 mm
Coil weight	1800 - 2200kg
Coil length	1350 - 1700mm
Coil dimensions	Outside diameter: 1250mm max Inside diameter: 850mm min

Note: Standard tyre reinforcement wire rod dimensional tolerances:
Gauge ± 0.20 mm, ovality 0.3mm max

Tyre reinforcement steel grades

The table below indicates the standard chemical analysis limits for British Steel's tyre reinforcement grades. Other grades and analysis limits can be considered and are available upon request.

Steel grade

	Analyse (%)	C	Si	Mn	P	S	Cr	Tensile (MPa)	Reduction of area (%)
60C	Max	0.65	0.30	0.60	0.020	0.020			
	Min	0.60	0.15	0.40					
	Typical cast	0.62	0.20	0.50	0.008	0.008		940	46
70C	Max	0.75	0.30	0.58	0.020	0.020			
	Min	0.70	0.15	0.44					
	Typical cast	0.72	0.20	0.50	0.008	0.008		1,030	40
80C	Max	0.85	0.30	0.60	0.020	0.020			
	Min	0.80	0.15	0.46					
	Typical cast	0.83	0.20	0.50	0.008	0.008		1,130	38
90C+Cr	Max	0.96	0.30	0.45	0.020	0.020	0.28		
	Min	0.90	0.15	0.30			0.18		
	Typical cast	0.92	0.20	0.38	0.008	0.008	0.22	1,260	34

BRITISHSTEEL.CO.UK

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WTDSHC:ENG:052017

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EXHIBIT 5

The Advantage of BOF Compared to EAF in Tire Cord

'17. 4. 13

POSCO

COMPANY INFORMATION THAT IS NOT
SUSCEPTIBLE TO PUBLIC
SUMMARIZATION

EXHIBIT 6



posco

2016 Earnings Release

January 25, 2017



Figures in this presentation are based on unaudited financial statements of the company.
Certain contents in this presentation are subject to change during the course of auditing process.

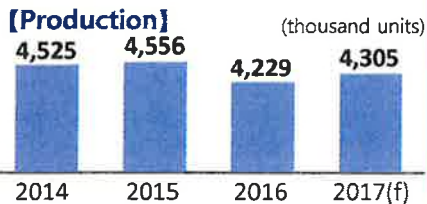
Domestic Steel Demand

Demand Outlook



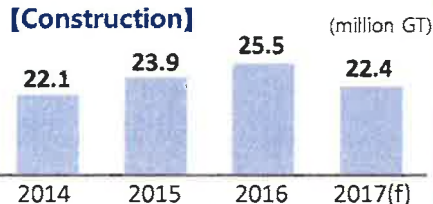
Automobile

- ✓ Export to emerging markets slightly increased on demand pick-up despite weak domestic demand, Production went up to 4.3 million



Shipbuilding

- ✓ As new orders declined from 2014 to 2016, ship construction turned on a downward in 2017

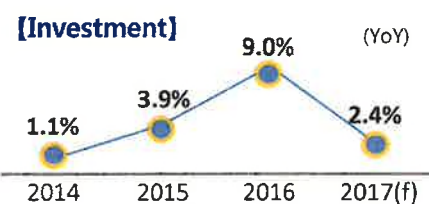


* Clarkson(Jan.2017), POSRI(Jan.2017)



Construction

- ✓ Construction investment forecast to be moderately expanded due to increasing housing orders despite sluggish public sector



* Bank of Korea (Dec.2016), POSRI(Jan.2017)

* Korea Automobile Manufacturers Association (Jan.2017), POSRI(Jan.2017)

Steel Demand and Supply Outlook

(million tons)

	2014	2015	2016(e)	YoY	2017(f)	YoY
Nominal Consumption	55.5	55.8	57.2	+ 2.4%	55.6	△ 2.8%
Export	32.3	31.6	30.8	△ 2.3%	30.9	+ 0.4%
Production	74.1	74.1	74.3	+ 0.3%	73.8	△ 0.7%
Import	13.7	13.2	13.7	+ 3.2%	12.7	△ 7.3%
Incl. Semi-Product	22.7	22.1	23.7	+ 7.5%	22.4	△ 5.5%

* POSRI (Jan.2017)

POSCO

2017 3Q Earnings Release

October 26, 2017

posco



(Appendix) Korean Steel Demand

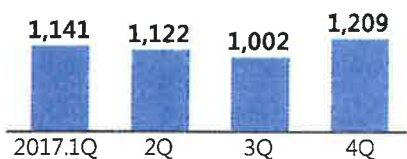
Demand Industry Outlook



Automobile

- ✓ Auto production in 2H shows recovery on improved domestic and export sales and the base effect of strike last year

[Production] (thousand cars)



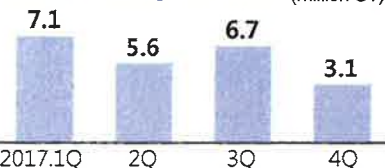
* Korea Automobile Manufacturers Association (2017.10), POSRI(2017.10)



Shipbuilding

- ✓ Despite recent increase of new orders, shipbuilding volume continues to decrease in 2H due to order drought in 2016

[Shipbuilding Volume] (million GT)



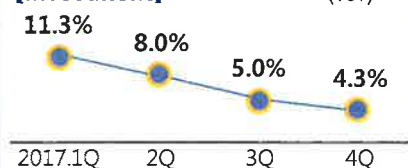
* Clarkson(2017.10), POSRI(2017.10)



Construction

- ✓ Construction investment in 2H will slow down gradually due to reduction of government SOC budget and property regulations

[Investment] (YoY)



* Bank of Korea(2017.9), POSRI(2017.10)

Steel Supply and Demand

(million tons)

	2014	2015	2016	2017(f)	1Q	2Q	3Q	4Q	YoY
Nominal Consumption	55.5	55.8	57.1	56.2	14.3	14.3	14.2	13.3	- 2.4%
Export	32.3	31.6	31.0	32.4	8.0	7.9	8.2	8.1	+ 1.9%
Production	74.1	74.1	74.3	77.3	19.1	19.3	19.9	18.9	+ 1.9%
Import	13.7	13.2	13.7	11.2	3.2	2.9	2.5	2.6	- 16.7%
Incl. Semi-product	22.7	22.1	23.7	20.9	5.8	5.6	4.6	5.0	- 6.8%

* POSRI(2017.10)

EXHIBIT 7

Forbes / Business / #BigBusiness

OCT 5, 2016 @ 12:15 PM

4,700

Hyundai Battles Striking Workers As Global Ambitions Surge



Current Accounts, CONTRIBUTOR

Notes on business, the economy and doers and their doings [FULL BIO](#) ✓

Opinions expressed by Forbes Contributors are their own.

POSTWRITTEN BY

Frank Ahrens

Ahrens is a former P.R. executive at Hyundai Motor and the author of "Seoul Man."



Striking Hyundai Motor workers march at a rally outside a Hyundai plant in Ulsan, South Korea, September 30. [+]

When Hyundai Motor started building factories outside of Korea in the late 1990s, it was partly to expand the Korean automaker's global footprint and meet its sales ambitions. But there was another reason: To make Hyundai less dependent on its annually striking, militant Korean workforce.

Korean unions are intense. At a press conference in 2011, a Korean labor leader invoked an ancient rite to demonstrate his commitment to his workers – he cut off the tip of his pinkie finger with an ax. Since South Korea became a democracy in 1987 and unions were permitted, Hyundai workers have staged strikes – full and partial -- in all but four years.

Now, Hyundai (and its sister company, Kia) is suffering through its first full strike in 12 years, with tens of thousands of workers across Korea walking off the job. Prior to the nationwide walkout, Hyundai unions staged 21 partial strikes this year, resulting in a production loss of at least 117,000 vehicles worth more than \$2.5 billion.

Given the large impact of Hyundai on South Korea's economy, the government is considering enacting emergency arbitration to end the strike, which likely will result in massive protests and possibly violence. But if the government does so, the union responded this week, it will expand the strike to Hyundai's affiliates.

The strike comes amid jarring changes in Korean labor. The government has pushed to give employers global-norm flexibility in firing poor workers and compensating good workers based on performance. This flies in the face of Korea's job-for-life workplace history and Confucian culture, where compensation – and social status – is based on age and experience.

The sooner the strike ends, the better for Hyundai, but even so, the impact will not be as severe as it would have been 20 years ago – Korean production now accounts for about 40 percent of Hyundai's global sales, thanks to the company's plants in China, the U.S., Europe, Russia, India, Brazil and elsewhere.

This global growth in manufacturing allowed Hyundai to accelerate its total sales from 2.8 million vehicles in 2008 to 4.7 million in 2013. During this period, the U.S. became Hyundai's second-biggest global market behind China, bypassing home-country Korea.

Hyundai kept the (relative) labor peace during this rapid expansion by giving its workers heavy concessions. Global expansion took priority over modernizing the labor environment; Hyundai wanted to avoid crippling strikes and workers got used to prosperity. By 2015, Hyundai union workers' annual salary hit \$87,000, more than double their 2002 wage. The per capita income in Ulsan, home to five Hyundai plants and much of the country's heavy industry, is the highest in South Korea, higher even than Seoul's.

The one-year Korean auto union contracts end each fall, and workers typically time their threats and walkouts to seal an 11th-hour deal just before the autumn holiday of Chuseok, the Korean Thanksgiving. This was the annual dance labor and management engaged in.

But in the 2011-12 period, instead of continuing its rapid global expansion, Hyundai made two key decisions that continue to affect it, in ways good and bad.



LABOR UNIONS

Hyundai's largest-ever labor strike to weigh on South Korean economy

Nyshka Chandran | @nyshkac

Published 8:53 PM ET Wed, 28 Sept 2016 | Updated 8:48 AM ET Thu, 29 Sept 2016



Hyundai Motor, the world's fifth-largest automaker, is no stranger to worker strikes but the current episode—its biggest ever—is raising alarm bells.

The company's labour union in South Korea conducted its first nationwide, full-day walkout in 12 years on Monday over demands for wage increases. The strike is expected to continue until next week depending on the company's response, a union spokesman told Reuters.

For the past three decades, Hyundai workers have gone on strike nearly every year but this year's stoppage is particularly severe, according to statistics from brokerage Kiwoom Securities.

- Unionized members have gone on strike 21 times and engaged in 27 rounds of wage negotiations so far this year, a new annual record.
- That's resulted in a production loss of 117,000 cars, worth more than 2.5 trillion won (\$2.5 billion), Hyundai's largest strike-related output loss.
- Because this week's strike is illegal, there is a "no work, no pay" policy in effect. Income loss is estimated at about 2 million won (\$1,790) per worker, the highest ever recorded.

Impact on Hyundai

This week's events are sure to dent the company's third quarter earnings, due October 1, and while the direct impact is expected to be



MENU

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Hyundai's operating profit will likely to take a 2.5 percent hit from strike-related losses, said Daniel Yoo, head of global wealth management at Kiwoom. The relatively mild overall impact on earnings meant Hyundai does have more room to increase labour costs and end the current deadlock, he continued.

But because recent earnings growth has been poor, bosses may be wary to give into worker's demands, Yoo suggested. The company's second quarter net profit fell 2.6 percent on year, the 10th straight quarterly decline.

"Korea's overall corporate earnings peaked in 2011 and there hasn't been much earnings growth since then so you can't blame management," Yoo said.

The larger, impact, however, could be on the company's reputation.

"Hyundai's image is currently having a hard time; there's a perception that the firm is behind the curve when it comes to electric cars so this strike is magnifying the negative image," Yoo said.



Why Hyundai Motors' labor union negotiations will be tricky

1:39 AM ET Wed, 28 Sept 2016 | 01:00

Wider implications

The strike "will throw a cold blanket over the slight recovery pace of the country's exports," South Korea's Ministry of Trade, Industry and Energy warned in a statement this week.

"The labour side should end the strike and make efforts to normalize operation, while the management should do its best to complete negotiations with the union to minimize the impact on the local and entire economy," the ministry said.

As Korea's largest carmaker, Hyundai, and its sister company Kia Motors, dominate the domestic auto industry, which makes up around 12 percent of Korea's manufacturing industry and 14 percent of total exports. Hyundai's output losses from the strike could further weigh on the nation's already-vulnerable exports, which declined for 19 out of the past 20 months.

If left unresolved, the labor dispute could delay exports of Korean vehicles worth \$1.3 billion, the Korea Herald reported, citing the government.

Labor Minister Lee Ki-kwon said on Wednesday that the government would consider all possible measures to end the strike given its impact on the broader industry and national economy, the Korea Herald reported.

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emerging Asia at Natixis, explained.

Management proposed in August to increase monthly wages by 58,000 won (\$52), in addition to a 350 percent bonus and a one-time cash payment of 3.3 million won (\$3,000), for each worker, Yonhap News reported. But nearly 80 percent of union members rejected the deal.

Asia's fourth-largest economy is experiencing a decline in the working-age population, a factor that gave employees leverage over companies, Nguyen pointed out.

Current developments could also pose weighty consequences on the future of Korean manufacturing.

"At the moment, 40 percent of Hyundai's production is within Korea. But given the challenges the firm face regarding production and profitability, it will likely consider off-shoring more production in the future," Nguyen said.

Even outside the auto industry, workers have demanded changes to existing wage conditions. On Tuesday, the Korean Public Service and Transport Workers' Union began an all-out strike to protest the government's merit pay system.

The country's labour unrest has pushed several firms, including Samsung Electronics, to move factories into lower-cost countries such as Vietnam, Nguyen said. "Increasingly, other Korean firms will be forced to do so to remain competitive globally."

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Shikha Chandran
Reporter, CNBC Asia-Pacific



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Watch



Aa

By MarketWatch

Published: Sept 26, 2016 1:11 a.m. ET



Aa

By In-Soo Nam

SEOUL-- Hyundai Motor Co. plants in South Korea were crippled by the first complete strike by unionized workers in more than a decade on Monday, threatening to worsen the auto maker's profit slide.

Assembly lines at all of the company's three domestic plants halted early in the day, crippling production of thousands of vehicles at the largest auto maker in South Korea. Production will remain suspended until after midnight, a union spokesman said.

The workers also plan partial strikes for six-hours from Tuesday through Friday, he said.

The local factories--which comprise Hyundai's largest manufacturing base globally--accounted for nearly 40% of its global output last year.

"While we are obviously disappointed with any temporary stoppage in production, we still continue to work with our labor union to resolve this issue as quickly as possible," the company said.

The action marks the first time that Hyundai's unionized workers, currently totaling nearly 50,000, have staged a full work stoppage since 2004.

The general strike comes after union members, who account for more than 70% of Hyundai's 67,000-strong domestic labor force, in August rejected a tentative wage deal agreed between their leaders and management, which had offered smaller increases in basic pay, bonuses and incentives than in the previous year's package, citing worsening business conditions.

Workers at Kia Motors Corp., a Hyundai affiliate, also said they would stage partial strikes for three days this week to demand higher wages.

**Watch**

As of 11

Hyundai posted a fourth consecutive decline in quarterly profit in the second quarter, and warned of a tough second half, dimming the outlook for achieving its full-year sales target. Analysts expect earnings to continue to slide.

"This year's strikes at Hyundai plants are longer than expected. Its third-quarter earnings should disappoint," said NH Investment & Securities analyst Cho Soo-hong. Mr. Cho expects the combined auto sales of Hyundai and Kia to decline 0.6% to about 7.96 million vehicles this year, below the duo's target of 8.13 million vehicles.

This summer, a series of partial strikes at Hyundai since July have led to lost production of more than 100,000 cars valued at two trillion won (\$1.8 billion), according to the company.

But much of lost production is usually recovered through extra work once the strikes end.

Write to In-Soo Nam at In-Soo.Nam@wsj.com

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EXHIBIT 8



TYRE INDUSTRY FEDERATION



FACTBOOK

**A guide to the UK tyre
industry from manufacture
to end of life reprocessing**

FACTBOOK 2014



TYRE INDUSTRY FEDERATION



UK MARKET CHARACTERISTICS

Approximate size of UK market in 2014

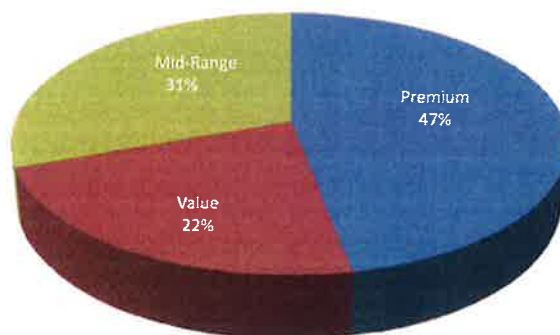
Type	MILLIONS OF TYRES		
	Original Equipment	Replacement	Total
Car	11.8	30.0	41.8
Van	1.6	2.8	4.4
Truck	0.3	2.0	2.3

Source: TIF 2014 estimate

In addition, about 5 million part-worn tyres are sold by retailers in the UK every year. These are principally recovered from end of life vehicles or are salvaged from tyres discarded following replacement. Part-worn tyres from other countries are also imported for sale in the UK. Regulations set the minimum standard for a part-worn tyre that can be legally sold in the UK. Surveys by Trading Standards Officers across the country have shown that most part-worn tyres offered for sale do not meet these regulations. Over half of those examined showed dangerous defects.

Typical market segmentation for replacement car tyres

There is a wide variety of price and performance in tyres offered in the UK market. Market analysts commonly classify tyres into 3 categories: Premium, Mid-range and Value



Source: