



## DANISH ENTERPRISE AND CONSTRUCTION AUTHORITY

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CONSTRUCTION AUTHORITY**

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### **Working document:**

### ***Analysis of the European trade with hot-dipped metallic coated (“HDMC”) iron and steel***

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### **Analysis of the European trade with hot-dipped metallic coated (“HDMC”) iron and steel**

This paper analyses European trade with HDMC iron and steel, with a special focus on imports from China, as a consequence of the dumping complaint issued by EUROFER in October 2007.

This analysis focuses on the CN numbers mentioned in the complaint. The CN numbers are:

72104100, 72104900, 72106100, 72106900, 72123000, 72125061, 72162100, 72259200, 72259900, 72269930 and 72269970.

### **Executive Summary**

It is argued by the complainants that the injury picture of the EU HDMC industry is significantly affected by Chinese imports and that the European industry has experienced lower profits and market shares because imports from China have increased significantly during the last four years.

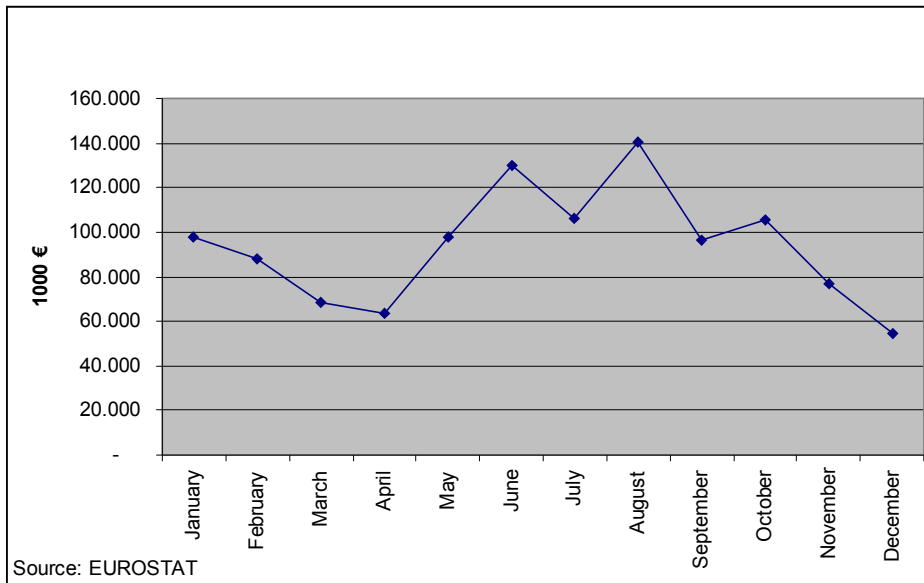
This analysis shows that imports of HDMC iron and steel from China have increased by more than 3000 percent from 2004 to 2007. It is nonetheless important to bear in mind that the high percentage increase is due to a very limited import (around 53.000 tons) from China in 2004. China is today the fourth biggest exporter of HDMC iron and steel to the EU, with a share of less than 10 percent of total exports into EU (intra-EU trade included). This is not an overwhelming share, taking into account that China is the world’s largest manufacturer of steel.

The complainants are concerned that this rapid increase in imports from China will continue in the following years. Our analysis does not necessarily support this argument.

Monthly trade data for 2007 show that the EU import of HDMC iron and steel from China have fallen in the last months of 2007. In September, October, November and December imports from China have fallen to less than 10 percent of the total EU imports, from a maximum in August of almost 15 percent. And the trend is declining. In December imports from China amounted to only 7.5 percent of total EU imports (intra-EU trade included).

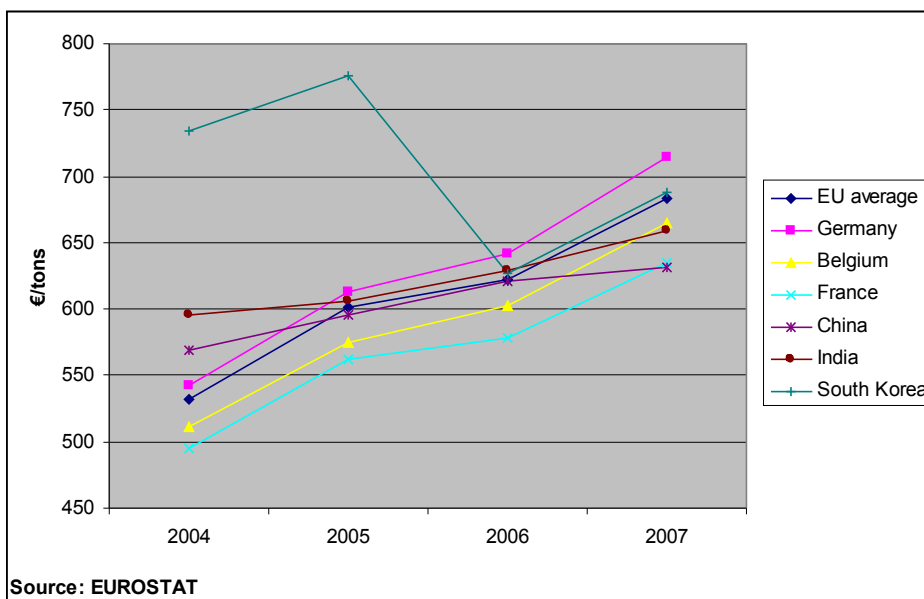
These conclusions are in line with expectations of a decline in exports of steel to the EU on more than 20 percent in 2008.

Figure A: EU imports of HDMC iron and steel from China (2007).



This analysis also focuses on import prices of HDMC iron and steel from China. The data show, that on the important product code, 72104900 (Flat-rolled products of iron or non-alloy steel, of a width of  $\geq 600$  mm), which accounts for almost 75 % of EU imports of the products mentioned in the complaint, the price difference between imports from China and the EU average import price is less than 4 % in 2007. Furthermore, the analysis shows that 2007 is the first year in which import prices from China are lower than the EU average, and that more than 60 percent of the relative decrease in Chinese import prices in the period 2006-2007 is due to the depreciation of the Chinese currency / the Chinese Yuan.

Figure B: The price of products imported to the EU from various destinations.



Our over-all findings are, that the import prices from China in 2006 were equal to the average EU import prices, and that the Chinese prices in 2007 were approximately 7.6 percent lower than the average EU import prices. 50 percent of this relative drop in prices is due to the decline of the Chinese currency.

The last part of the analysis is shading light on the consequences for the EU consumers, mainly the automotive and the machinery industry, if an anti-dumping duty is to be introduced on HDMC iron and steel from China. Estimates using our anti-dumping-model show, that a 20 percent dumping duty on the products concerned, will result in a total loss to the European consumers and users, mainly the machinery and automotive industry, of more than 230 million euros yearly.

### **The statistical data**

This analysis is based on the EUROSTAT trade statistics. The statistics show both the extra-EU trade and the Intra-EU trade, and is displaying gross data. Because of this, some goods might count more than one time in the statistics. This is the case when goods are imported into an EU country with the purpose of being re-exported to other EU countries. This is especially the case in countries with large harbours, ex. Belgium and the Netherlands, where goods arrive to be distributed to the rest of Europe.

### **European imports of HDMC**

tables 1a and 1b show the origin of EU imports of HDMC iron and steel. These numbers include both intra-EU trade and imports from non-EU countries.

As the tables show, Germany and Belgium are, with total exports in 2007 of nearly 2 billion euros (almost 3 million tons) each, the most important exporters of HDMC to the EU countries. China is in fourth place with a total export in 2007 of approximately 1,1 billion euros (almost 2 billion tons), but the tables show, that imports of HDMC from China have experienced extensive growth from almost nothing in 2004 to around 10 percent of total EU imports in 2007. It is also worth noticing, that total imports of HDMC to the European Union have risen.

*Table 1a: The nine biggest exporters of HDMC into the EU (1000 €)*

	2004	2005	2006	2007
Germany	1.386.800	1.505.285	1.824.502	1.963.965
Belgium	1.271.654	1.302.520	1.616.777	1.881.917
France	815.226	1.003.123	1.082.000	1.167.203
China	30.125	106.964	468.801	1.124.518
The Netherlands	635.233	669.352	803.756	1.011.332
Italy	360.830	458.706	559.997	700.710
Austria	485.142	502.905	566.124	670.614
Luxembourg	281.931	255.839	368.414	544.402
India	218.569	227.454	348.939	444.339



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South Korea	15.177	24.048	74.741	299.056
All Countrys	7.222.389	7.673.752	9.631.556	12.073.816

*Table 2b: The nine biggest exporters of HDMC into the EU (tons)*

	2004	2005	2006	2007
Germany	2.554.681	2.458.416	2.843.541	2.749.017
Belgium	2.488.857	2.265.840	2.682.638	2.833.019
France	1.646.872	1.784.655	1.872.963	1.837.431
China	52.904	179.437	754.397	1.781.156
The Netherlands	1.242.769	1.104.569	1.306.222	1.492.207
Italy	665.185	757.656	914.775	1.001.291
Austria	927.769	863.318	929.550	987.825
Luxembourg	569.409	439.963	554.396	760.564
India	367.138	375.547	554.657	674.709
South Korea	20.668	30.982	119.194	434.641
All Countrys	13.560.961	12.759.523	15.470.929	17.678.743

*Table 1c: The price on HDMC exported to the EU (€/tons)*

	2004	2005	2006	2007
Germany	543	612	642	714
Belgium	511	575	603	664
France	495	562	578	635
China	569	596	621	631
The Netherlands	511	606	615	678
Italy	542	605	612	700
Austria	523	583	609	679
Luxembourg	495	582	665	716
India	595	606	629	659
South Korea	734	776	627	688
All Countrys	533	601	623	683

As table 1c shows, the prices of HDMC have increased over the last four years. In 2004 the average import price of HDMC was around 532 euro/tons, and in 2007 it was almost 683 euro/tons. That is almost a 30 percent increase in prices. In respect of the three largest non-EU exporters, China, India and South Korea, the table shows, that the increase in prices has not been quite as steep as for the EU countries. Import prices of HDMC from China and India have only increased by approximately 10 percent in the period, and the prices from South Korea have decreased, although from a very high level.

This steep increase in import prices is also visible in table 2, where the countries growth rates in exports of HDMC to the European market are shown. Germany, Belgium and France have increased their export of HDMC to the EU by approximately 10 percent, measured in tons, and more than 40 percent measured in value. This difference also illustrates the steep increase in prices. From 2004 to 2007 Chinese exports to the EU of HDMC have grown more than 30 times, while South Korean ex-

ports have grown more than 20 times. The main reason for these high growth-rates is very limited exports to the EU in 2004 from these countries.

*Table 2: The growth in EU import from the biggest exporters of HDMC to the EU.*

	Growth in export to the EU 2004-2007 (%) Euro	Growth in export to the EU 2004-2007 (%) tons
Germany	41.62%	7.61%
Belgium	47.99%	13.83%
France	43.18%	11.57%
China	3632.84%	3266.77%
The Netherlands	59.21%	20.07%
Italy	94.19%	50.53%
Austria	38.23%	6.47%
Luxembourg	93.10%	33.57%
India	103.29%	83.78%
South Korea	1870.46%	2002.97%
Other Countries	67.17%	30.36%

Table 3 shows how the market for imported HDMC in the EU has evolved over the last four years. The table shows, that Germany, Belgium and France have lost market shares, while China's share of the market has risen from 0,5 percent to almost 10 percent. For the rest of the major exporters the market share has been almost unchanged.

*Table 3: The biggest exporter's share of the total EU import of HDMC (export value in percent of total export value).*

	2004	2005	2006	2007
Germany	19.2%	19.6%	18.9%	16.3%
Belgium	17.6%	17.0%	16.8%	15.6%
France	11.3%	13.1%	11.2%	9.7%
China	0.4%	1.4%	4.9%	9.3%
The Netherlands	3.8%	8.7%	8.3%	8.4%
Italy	5.0%	6.0%	5.8%	5.8%
Austria	6.7%	6.6%	5.9%	5.6%
Luxembourg	3.9%	3.3%	3.8%	4.5%
India	3.0%	3.0%	3.6%	3.7%
South Korea	0.2%	0.3%	0.8%	2.5%

The statistics however do not indicate that this rapid increase in China's market share will continue in 2008. The monthly data presented in table 4 are, on the contrary, showing that imports from China have fallen in the last months of 2007, both in absolute and in relative terms. Comparison with 2006 shows that this is not due to seasonal variations. The statistics further more show, that the declines in Chinese exports are followed by an increase in intra-EU trade.

*Table 4: The trend in import of HDMC iron and steel from China through 2007 (1000 €)*

	Total EU import (intra-EU trade included)	EU import from China	Intra-EU trade	China's share of import	Intra EU-trade as percentage of total import
January	1.067.990	97.755	799.395	9.2%	74.9%
February	993.419	88.066	796.620	8.9%	80.2%
March	1.052.085	68.198	844.439	6.5%	80.3%
April	1.010.518	63.873	803.148	6.3%	79.5%
May	1.077.971	97.998	856.727	9.1%	79.5%
June	1.134.482	129.631	863.296	11.4%	76.1%
July	1.019.313	105.901	768.676	10.4%	75.4%
August	939.888	140.181	671.690	14.9%	71.5%
September	1.015.010	96.087	798.881	9.5%	78.7%
October	1.097.650	105.579	863.995	9.6%	78.7%
November	944.612	76.959	753.655	8.1%	79.8%
December	720.879	54.288	568.178	7.5%	78.8%

### **The European importers**

Table 5a and 5b show the destination of exports of HDMC to the EU. The figures show that the largest importers of HDMC iron and steel in the EU are Germany, France, Belgium, Italy, UK and Spain, accounting for more than 60 percent of total import, and more than 80 percent of total imports from China.

The trade pattern is however different. Germany and France import almost exclusively from other EU countries (more than 95 percent), Italy, Spain and UK import approximately 2/3 of the products from other EU countries, while Belgium only imports 1/3 of its total imports of HDMC iron and steel from other EU countries. In Spain, Italy and Belgium imports from China account for around 20-25 percent of total imports of HDMC iron and steel, in UK it is about 10 percent, and in France and Germany it is less than 2 percent.

Statistics however show total trade, and do not take into account if the steel is used in the import country or re-exported to other European countries.



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*Table 5a: The European Country's import from various destinations  
(1000 €)*

Export Country Import Country	Total	EU	China	Rest of the World	Share of total EU import
France	1.413.545	1.345.307	23.080	45.158	11.2%
The Netherlands	344.988	301.715	10.283	32.990	2.7%
Germany	2.138.923	2.085.655	35.101	18.168	17.0%
Italy	1.191.444	737.675	240.900	212.869	9.5%
UK	1.024.876	695.553	96.495	232.829	8.2%
Ireland	24.909	24.064	94	751	0.2%
Denmark	170.826	159.002	3.490	8.334	1.4%
Greece	122.064	25.158	26.614	70.292	1.0%
Portugal	175.151	119.373	14.508	41.272	1.4%
Spain	908.847	556.680	221.166	131.001	7.2%
Belgium	1.273.900	507.002	311.739	455.160	10.1%
Luxemborg	14.984	14.952	0	31	0.1%
Sweden	770.164	717.497	6.664	46.004	6.1%
Finland	92.444	88.420	1.454	2.570	0.7%
Austria	326.409	324.512	498	1.399	2.6%
Malta	840	574	12	254	0.0%
Estonia	48.083	30.464	3.994	13.625	0.4%
Latvia	49.359	18.919	10.958	19.483	0.4%
Lituania	53.801	45.770	2.320	5.712	0.4%
Polen	729.856	620.117	83.345	26.394	5.8%
Czech Republic	567.799	550.367	2.320	15.112	4.5%
Slovakia	217.550	194.576	6.982	15.992	1.7%
Hungary	122.056	112.148	759	9.149	1.0%
Slovenia	567.799	550.367	2.320	15.112	4.5%
Cyprus	11.641	5.457	1.892	4.292	0.1%
Romania	140.867	52.893	9.471	78.502	1.1%
Bulgary	62.266	21.280	3.792	37.194	0.5%

*Table 5b: The European Country's import from various destinations (1000 €)*

	EU	China	Rest of the World	Russia	USA
France	95.2%	1.6%	3.1%	0.0%	0.0%
The Netherlands	87.5%	3.0%	9.4%		0.2%
Germany	97.5%	1.6%	0.5%	0.4%	0.0%
Italy	61.9%	20.2%	17.8%	0.0%	0.1%
UK	67.9%	9.4%	22.1%	0.4%	0.2%
Ireland	96.6%	0.4%	2.5%		0.5%
Denmark	93.1%	2.0%	4.0%	0.9%	0.0%
Greece	20.6%	21.8%	57.6%		0.0%
Portugal	68.2%	8.3%	23.3%	0.3%	
Spain	61.3%	24.3%	14.2%	0.2%	0.0%
Belgium	39.8%	24.5%	35.3%	0.2%	0.2%
Luxemborg	99.8%		0.2%		
Sweden	93.2%	0.9%	5.6%	0.4%	0.0%
Finland	95.6%	1.6%	0.5%	2.3%	0.0%
Austria	99.4%	0.2%	0.4%		0.0%
Malta	68.3%	1.4%	30.2%		
Estonia	63.4%	8.3%	16.4%	9.8%	0.3%
Latvia	38.3%	22.2%	11.5%	25.7%	
Lituania	85.1%	4.3%	4.7%	0.3%	
Polen	85.0%	11.4%	2.9%	0.1%	0.0%
Czech Republic	96.9%	0.4%	1.6%	1.0%	0.0%
Slovakia	89.4%	3.2%	2.2%	3.6%	0.9%
Hungary	91.9%	0.6%	7.4%		0.0%
Slovenia	96.9%	0.4%	1.6%	1.0%	0.0%
Cyprus	46.9%	16.3%	36.9%		
Romania	37.5%	6.7%	55.5%		
Bulgary	34.2%	6.1%	56.8%		

### **The price of imported HDMC iron and steel**

In the following we take a closer look on how the prices of HDMC iron and steel have developed over the last four years, especially in respect to the price of products imported from China. Table 1c shows that the prices of HDMC iron and steel have increase substantially over the last years. Table 6 shows how the price on imported products from China has developed, relatively to the average price on imported steel in the EU.

The relative price is divided into codes at the CN8 level. The table shows that almost 75 percent of the EU trade with the products concerned in the complaint can be referred to the product code CN72104900, which covers flat-rolled products of iron or non-alloy steel, of a width above 600 mm. Other important product codes are CN72123000 (flat-rolled products of iron or non-alloy steel, of a width under 600 mm) with 8.2 percent of the total EU import in 2007 and CN72259200 (Flat-rolled products of alloy steel other than stainless, of a width of more than 600 mm) with 6.8 percent.

The price comparison shows that the price of HDMC iron and steel from China has declined in comparison with the average EU price. In 2004 the import price from China was 6.9 percent higher than the EU average import price, in 2005 and 2006 the price was almost the same, while in 2007 the products from China were 7.6 percent cheaper than the EU average price. In that way, the table shows, that from 2006 to 2007 the import prices from China have decreased with 7.4 percent (from -0.2 to -7.6) relative to the average import price in the EU.

For the dominating product, code CN72104900, the price of goods from China was higher than the average EU import price in 2004, 2005 and 2006. However, in 2007 the import price from China was 3.8 percent lower than the EU average price. In the other two important category's the price of Chinese products are around 23 percent lower (CN72123000) and 25 percent higher (CN72259200) than the EU average import price.

*Table 6: Difference between average EU import prices and import prices on products from China.*

Product code	2004	2005	2006	2007	Share of total EU import 2007
All codes	6.9%	-0.9%	-0.2%	-7.6%	100.0%
72104100	28.5%	63.2%	-13.4%	-17.1%	0.8%
<b>72104900</b>	<b>8.6%</b>	<b>2.1%</b>	<b>2.7%</b>	<b>-3.8%</b>	<b>72.4%</b>
72106100	27.4%	5.6%	-6.1%	-6.5%	3.9%
72106900	108.9%	-14.7%	-20.3%	-7.9%	2.1%
72123000	-9.8%	3.9%	-16.2%	-23.2%	8.2%
72125061			-4.7%	-11.5%	0.1%
72162100	52.2%	-29.0%	-5.9%	-22.0%	2.3%
72259200			16.9%	25.5%	6.8%
72259900	31.0%	-40.9%	88.6%	-41.0%	2.8%
72269930					0.1%
72269970				69.1%	0.5%

One of the explanations behind this relative drop in prices from China in 2007 is the decline in the Chinese currency. In table 7 the difference in import prices is shown in 2006 prices, as if the Chinese currency had sustained its strength through 2007.

The table shows, that in 2006 prices the difference between HDMC iron and steel imported from China and the EU average import price was 3.8 percent in 2007. In that way the figure shows that the decline of the Chinese currency is responsible for more than half of the relative decline in the Chinese prices (When corrected for changes in currency the price difference is 3.6 percent (the difference between -0,2% and -3.8%, table 7) without correction for currency changes the price difference is 7.4 percent (table 6)).

For the dominant product code, CN72104900, the calculations show, that in 2006 prices the import price from China is almost the same as the average EU import price. In this category almost 60 percent of the relative decline in the Chinese prices is due to the declining Chinese currency.

*Table 7: Difference between average EU import price and import price on goods from China, corrected for the development in the Chinese currency (Yuan). Difference measured in 2006 prices.*

Product code	Share of total		
	2006	2007	EU import 2007
HDMC total	-0.2%	-3.8%	100.0%
72104100	-13.4%	-13.7%	0.8%
<b>72104900</b>	<b>2.7%</b>	<b>0.2%</b>	<b>72.4%</b>
72106100	-6.1%	-2.7%	3.9%
72106900	-20.3%	-4.1%	2.1%
72123000	-16.2%	-20.0%	8.2%
72125061	-4.7%	-7.9%	0.1%
72162100	-5.9%	-18.8%	2.3%
72259200	16.9%	30.7%	6.8%
72259900	88.6%	-38.5%	2.8%
72269930			0.1%
72269970		76.1%	0.5%

### **Impact of imposing antidumping duty – “the Copenhagen anti-dumping model”**

In the following we try to estimate the economical consequences for the EU, if the Commission decides to introduce an anti-dumping duty on HDMC iron and steel from China.

We use “the Copenhagen anti-dumping model”, which is a multiregional partial non-linear Armington model. Using the model we estimate the consequences of the introduction of an antidumping duty of 20 percent, and the trade data used is from 2007. The results are shown in table 8.

*Table 8: Results of the Copenhagen Anti-dumping model: EU27 income effect.*

<b>EU27 INCOME EFFECTS</b>	
Producer Surplus	124.425,6
Consumer Surplus	-237.619,7
<b>TOTAL</b>	<b>-113.196,1</b>

The model shows that the imposition of an anti-dumping duty of 20 percent on HDMC iron and steel from China will result in a total dead weight loss in the EU of 113 million euros yearly. The loss is nonetheless more than twice as big for the European consumers and users, primarily the machine and automotive industry. The model estimates a total consumer and user loss of 238 million euro. On the other hand, the European

producers gain a surplus of 124 million euros due to higher selling prices and larger market shares.

The model also provides some estimates on specific countries. The model shows that the imports from China will be reduced by 50 percent, should a 20 percent duty be imposed. Trade diversion will take place since a large part of these imports will be substituted with imports from the rest of the world, from where exports to the EU will increase by 10 percent. The Intra-European trade will increase by around 2 percent. The average price for HDMC iron and steel will increase by between 1 and 1.5 percent.