

Metal Bulletin's 11th International Galvanizing and Coil Coating Steel Conference – Barcelona - September 2006

HDG market prospects and maximizing value-creation

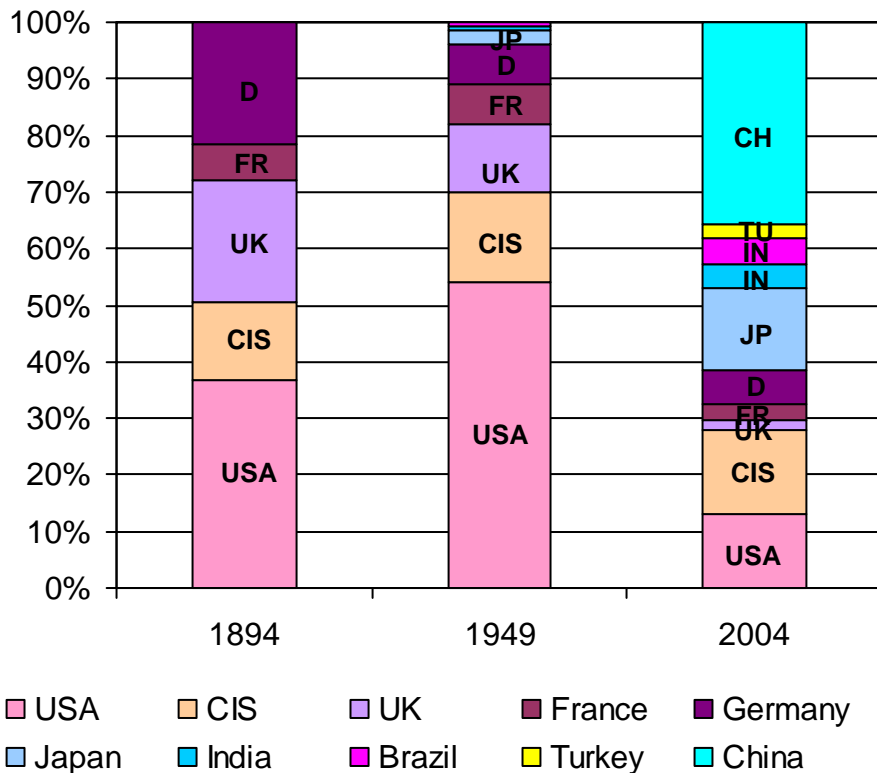


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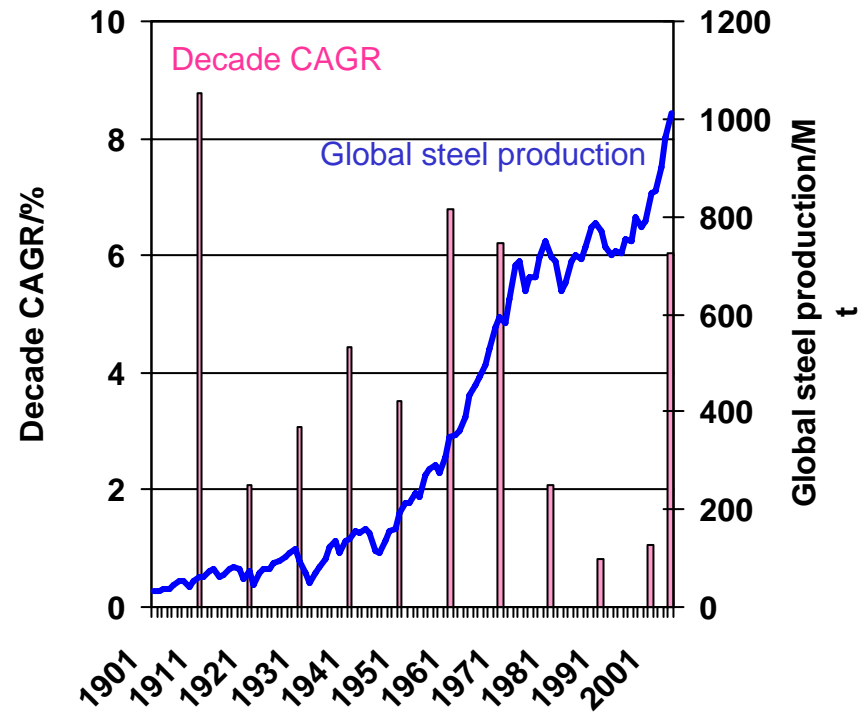
Hatch Beddows

Just 50 years ago, global steel production was almost an exclusively Atlantic basin based industry, now it is Asian based – for this global industry, “Normal” growth rate has just been resumed

Steel production by region



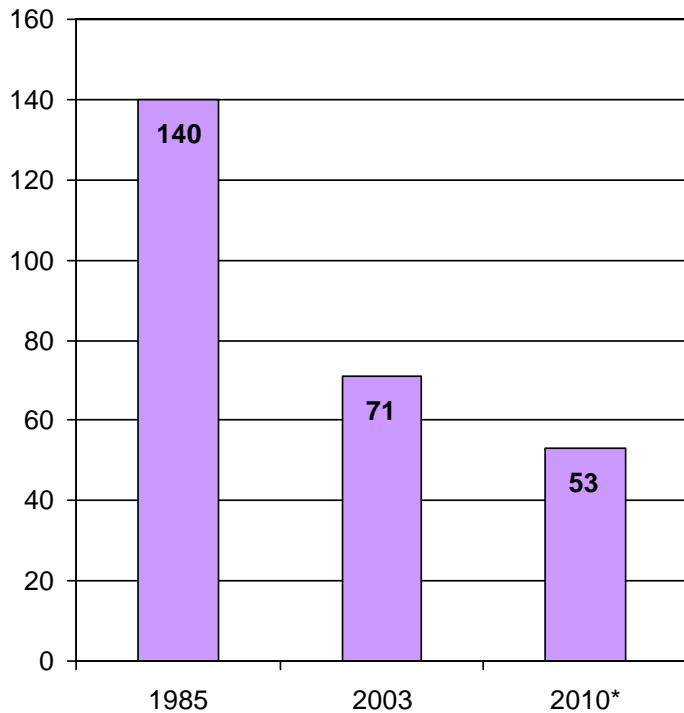
Global steel production and growth rates



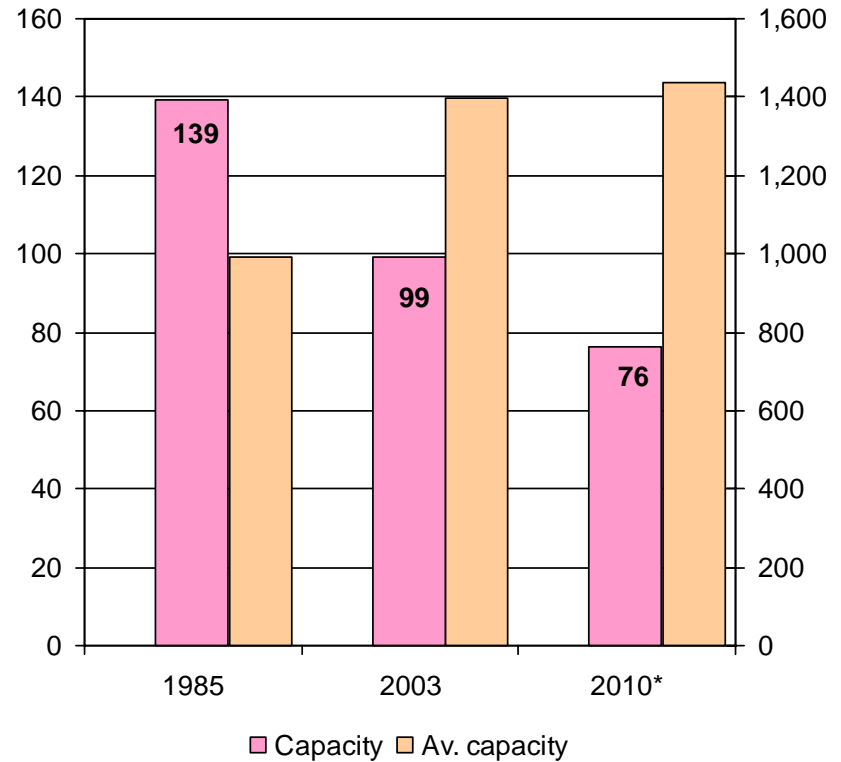
Source: IISI, Zimmerman and Hatch Beddows

W. Europe (and N. America) rightly or wrongly are no longer the leaders in global steel making – iron and steel making is in permanent decline

Number of Blast Furnaces in Western Europe



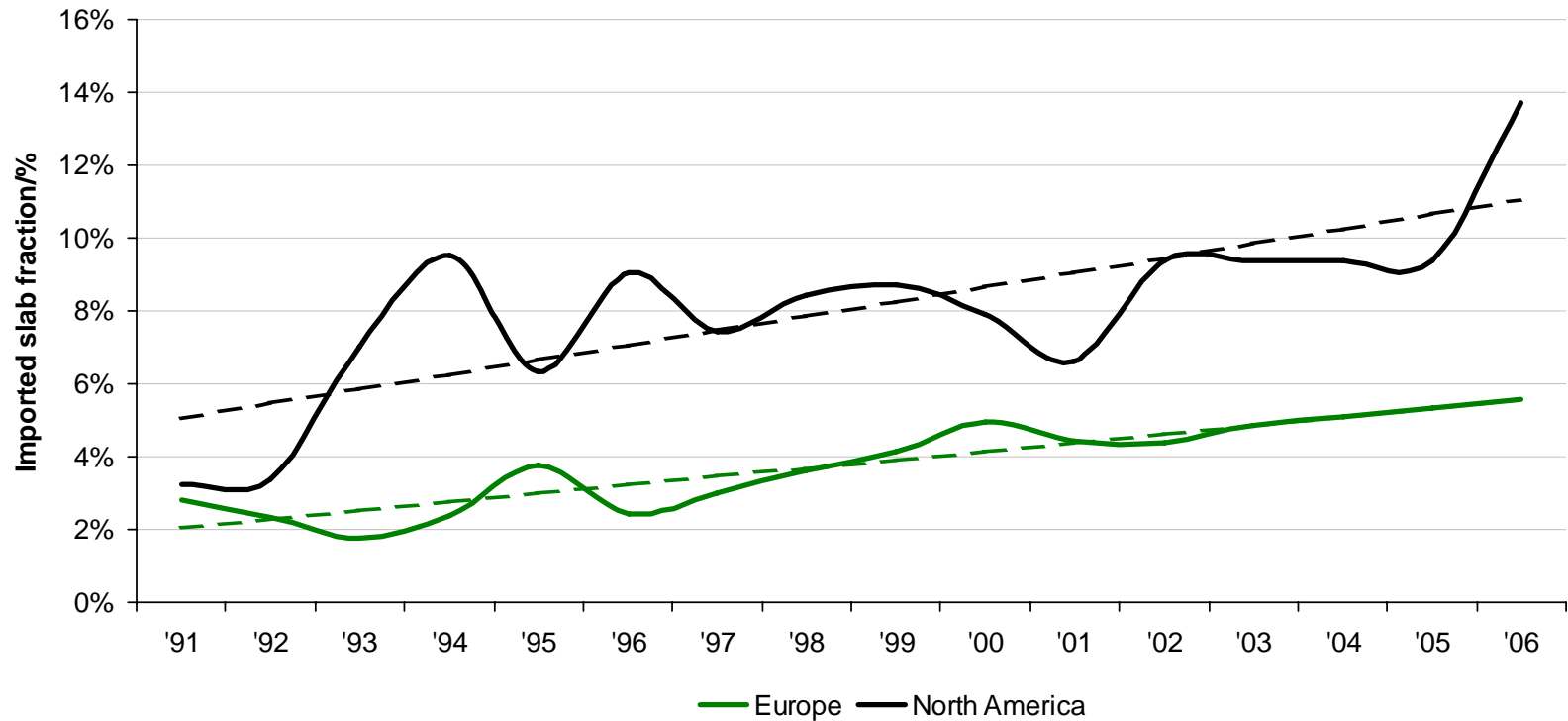
Total BF Capacity Western Europe (MT)



Source: James King and Hatch Beddows

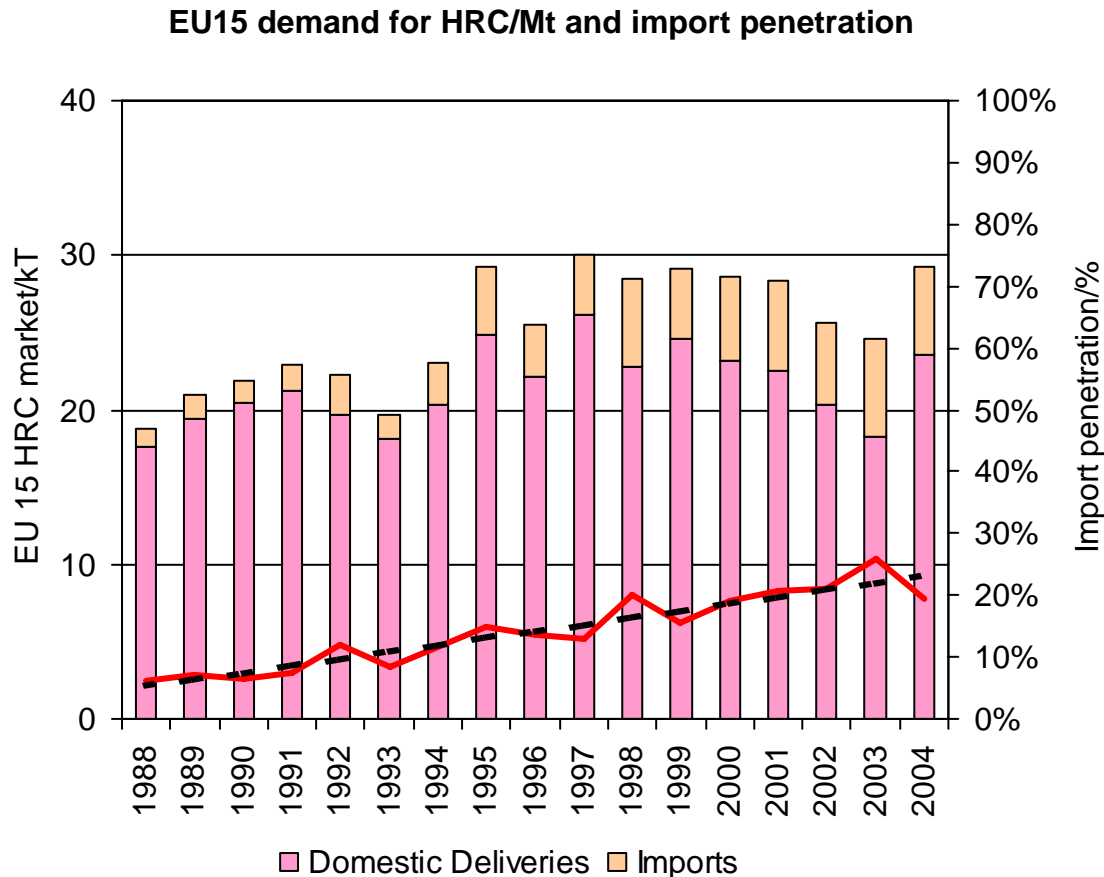
W. Europe and N. America are becoming increasingly dependent on lower cost imported slab

Imported slab as fraction of total slab requirements



Source: WSD, ISSB, IISI and Hatch Beddows

For HRC also, import penetration continues to trend upwards relentlessly at 1% per year in absolute terms, reaching 20% in 2002

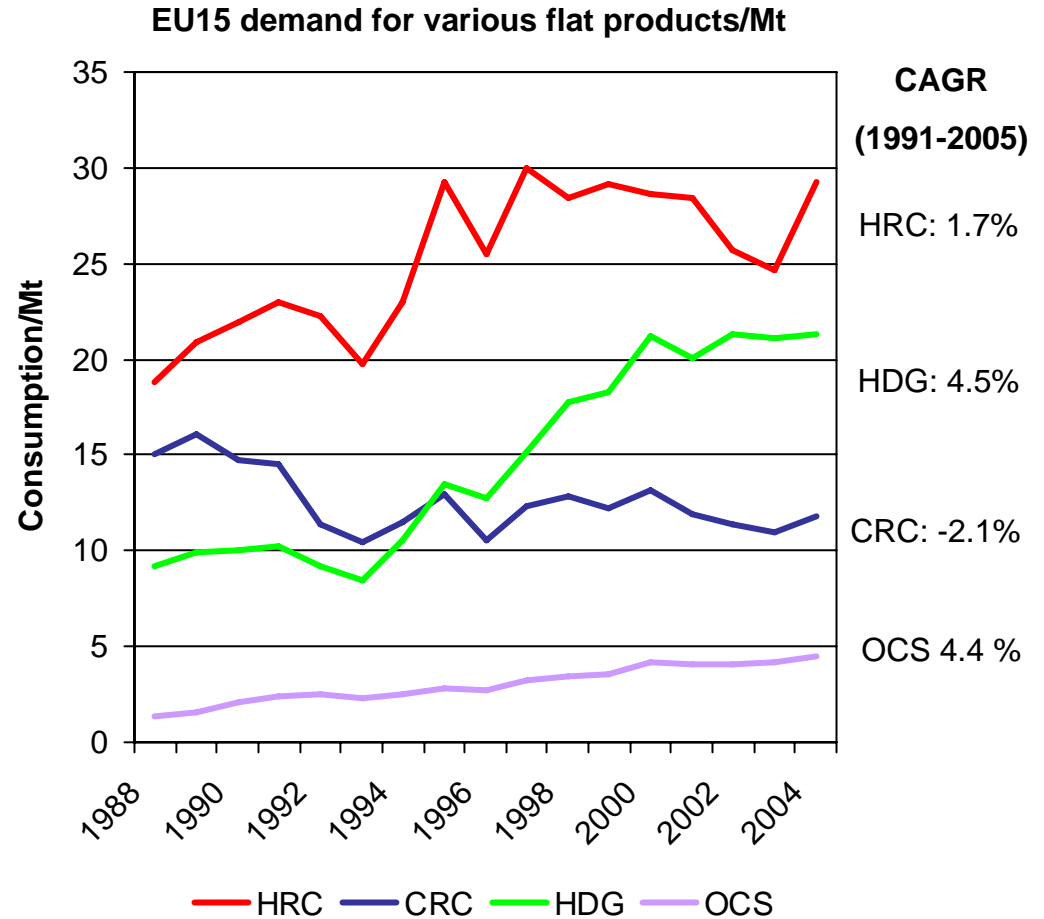


- Import penetration of HRC into EU continues to trend upwards and reached the 20% mark in 2002
- It is envisaged that the European HRC market will become increasingly accessible in the future, as lower cost competitors from Eastern Europe improve:-
 - quality standards and
 - increase productivity
 - new ownership profiles emerge

Source:-WSD, ISSB and Hatch Beddows

The total European flat products market is about 75 Mt and in the absence of growth the focus for European steelmakers is on retaining value and in exploiting higher growth coated markets

- The EU 15 market for all flat products is 75 Mt
- Since 1991 the compound annual growth rate (CAGR) for flat products consumption is 2.2%, the five year value is 1.1%
- For a market that has stopped growing, the focus for steel producers is on capturing maximum value

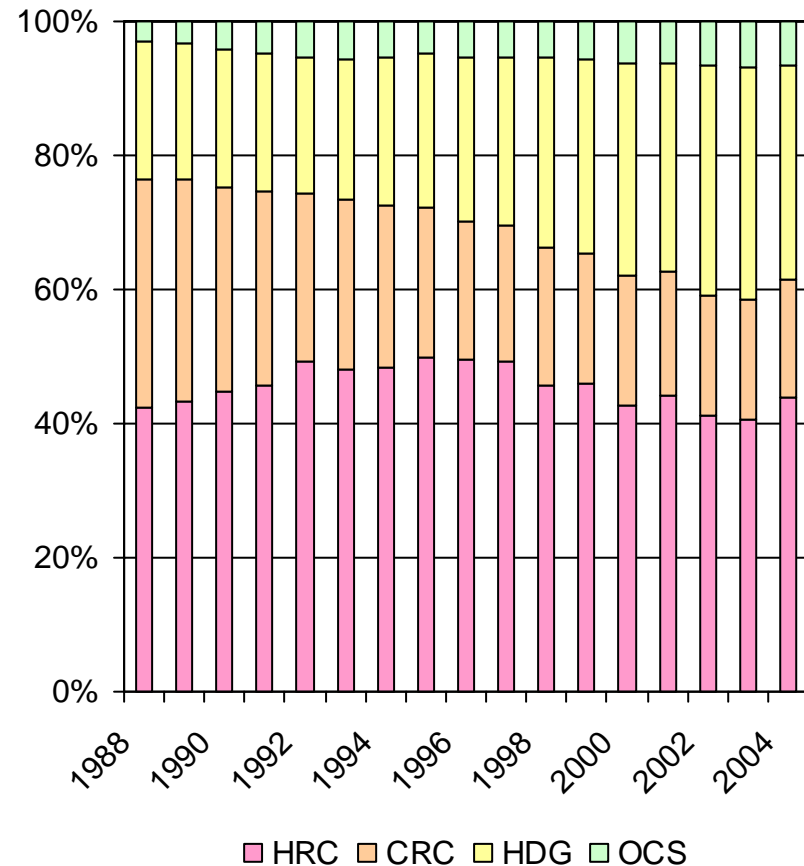


Source:- Hatch Beddows

HDG and OCS continue to grow within W. Europe, though HRC has shown some resilience in the market

- HDG has grown, mainly at the expense of CRC: OCS and HRC have also shown some growth
- Demand for CR strip is in long term decline across Europe and is significantly affected by two structural factors:
 - Substitution by zinc coated sheet for better corrosion resistance
 - Substitution by thin-gauge HRC, which is cheaper than CRC and can replace thicker gauge CRC product in a number of applications

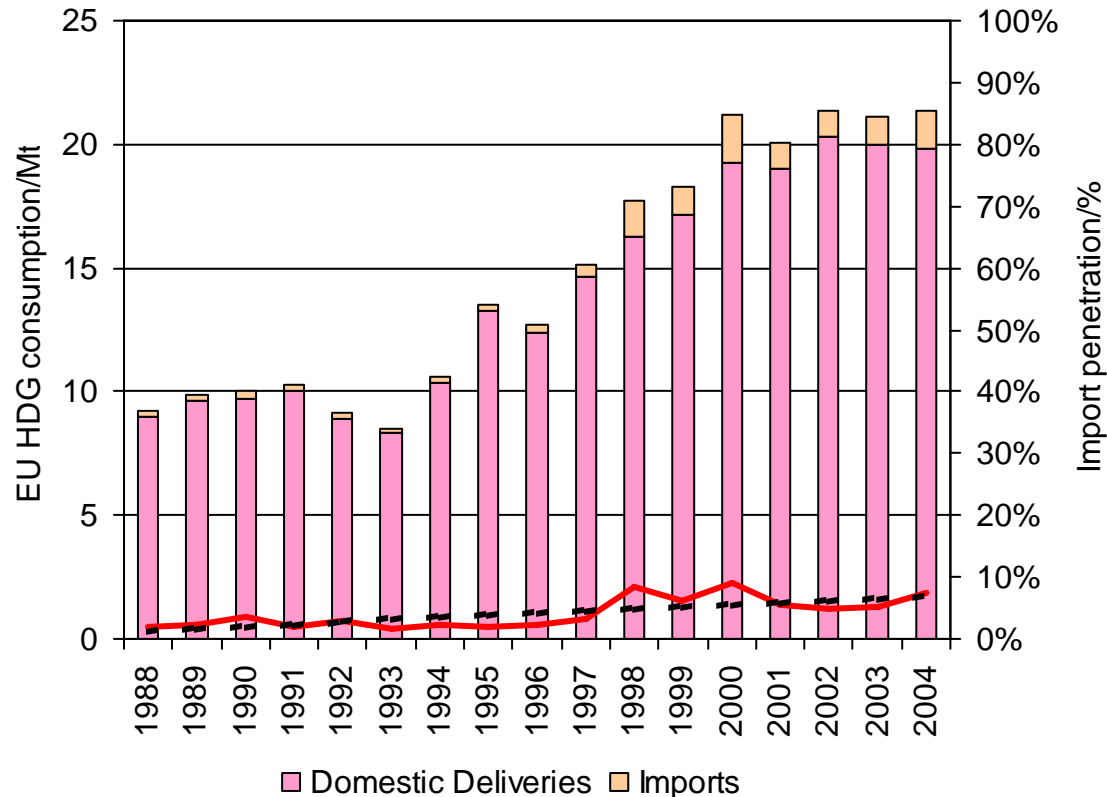
EU15 demand fractions for various flat products



Source:-Hatch Beddows

In contrast to upstream products European HDG import penetration has been relatively low – however, the rate of relative growth at 7% pa is now comparable to HRC

EU15 demand for HDG (Mt) and import penetration/%

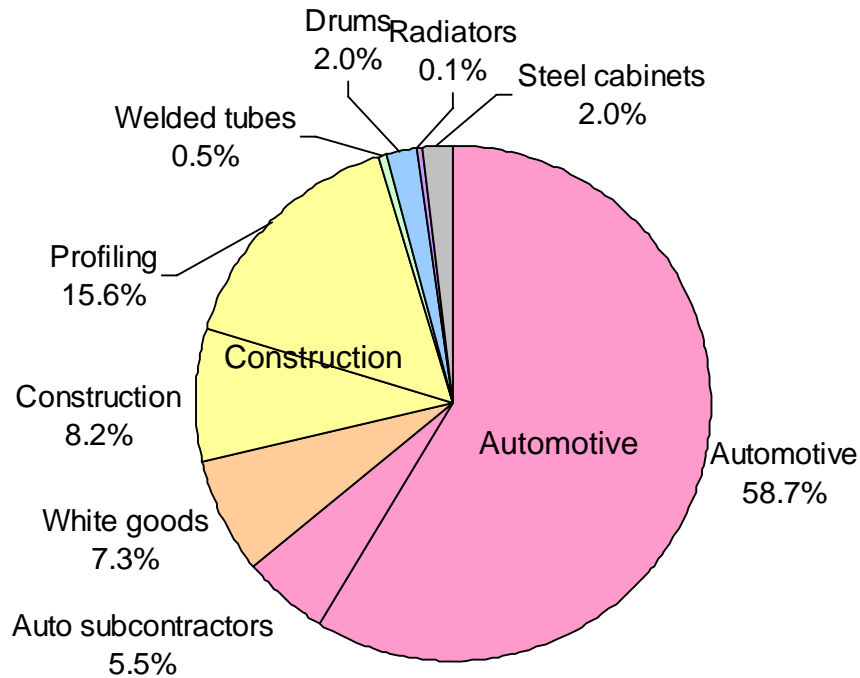


- HDG import penetration has been relatively low and over the last 10 years and has just reached 10%
- Only recently have accession countries and the CIS developed the capability of producing HDG in any quality yet alone that required by the automotive industry
- Consequently a third step change in import penetration is anticipated as galvanising capacity grows in the region and internationally

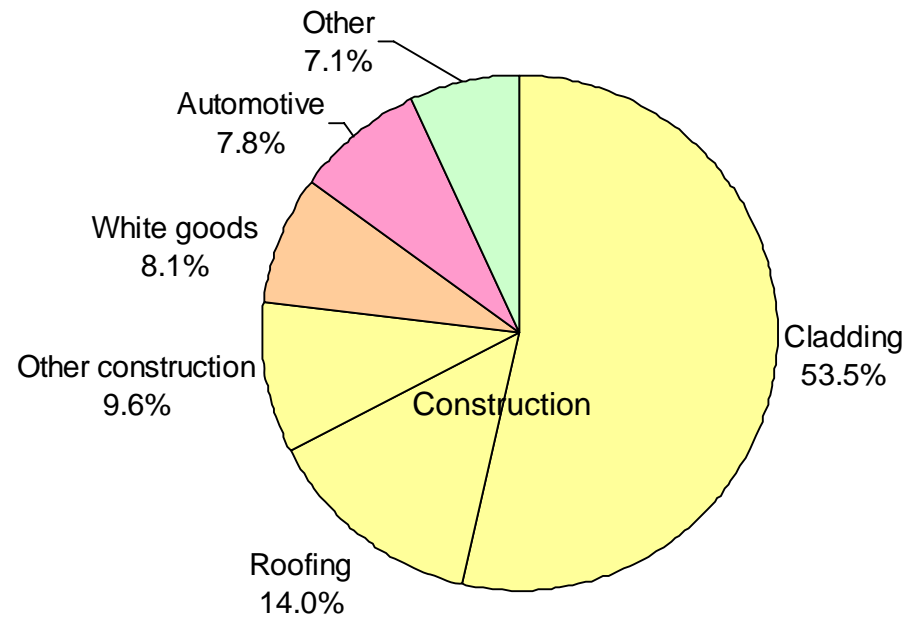
Source:-WSD, ISSB and Hatch Beddows

Automotive and construction are by far the major consumers of coated products – W. European automotive will be low growth but growth and new opportunities in construction remain strong

Sector consumption of EU15 HDG



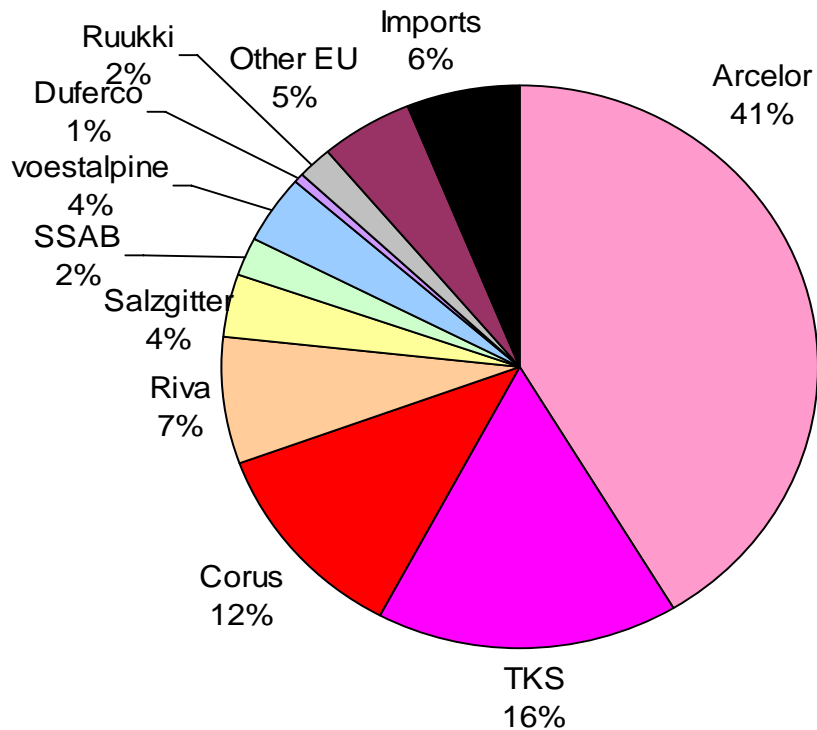
Sector consumption of EU15 OCS



Source:-CRU and Hatch Beddows

The W. European HDG market is very ordered and structured with the big four producers supplying over 75% of their market – they now know how to look after their customers

EU15 market shares for HDG

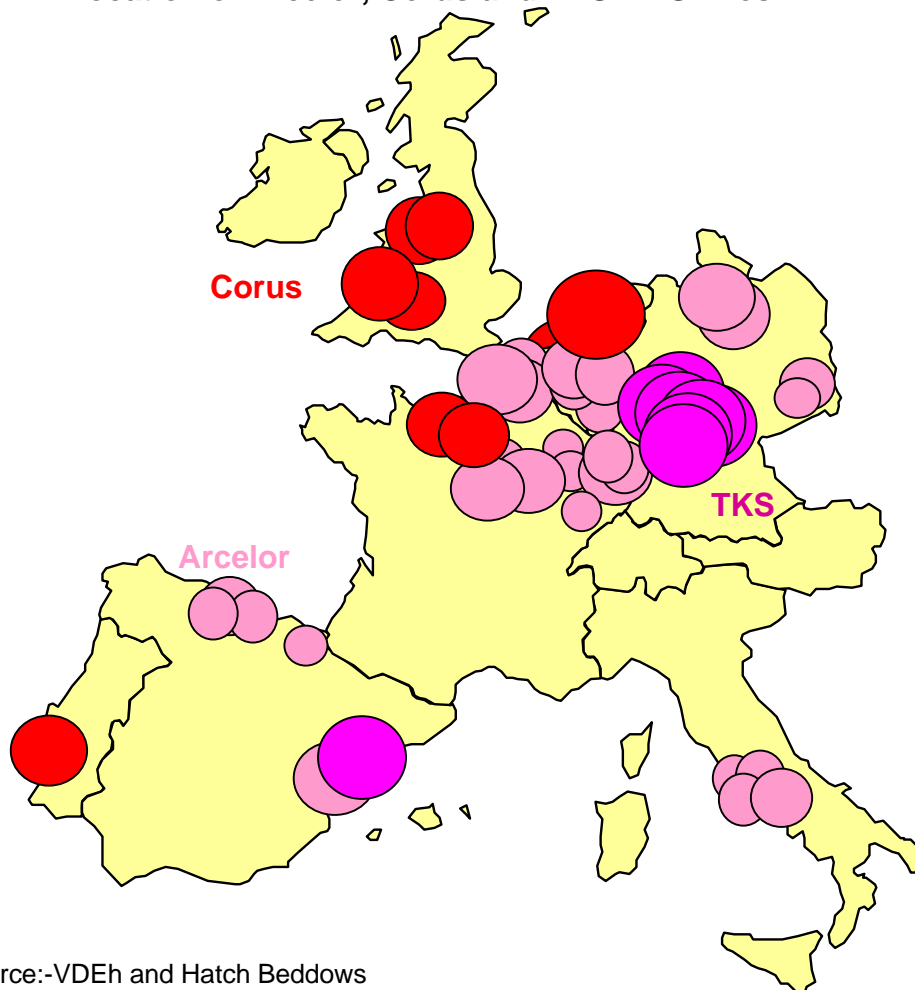


- The European big four producers supply over 75% of their market with Arcelor dominating at over 40% market share
 - **Arcelor** supply from about 30 HDG lines
 - **TKS** supply from about 9 HDG lines
 - **Corus** supply from about 9 HDG lines
- A total of 11 EU 15 companies supply the market with just 6% of HRC imported from outside the EU15

Source:-Hatch Beddows

Coating lines can be and need to be far more regional and flexible than highly invested melt shops and hot and cold mills – logistics with customer service and product range are the key providers of competitive advantage

Location of Arcelor, Corus and TKS HDG lines



- Several JV and independent coating lines currently operate within Europe, though these are few by world standards
- The fraction of direct mill shipments in Europe continues to fall as SSCs take more business from the mills
- Both independent and mill owned SSCs have seen growth in the volumes, products and services they provide
- The full supply package in terms of dimensions, grades, coatings is what provides competitive advantage over so called “commodity” imports

Source:-VDEh and Hatch Beddows

HDG MARKET PROSPECTS AND MAXIMIZING VALUE-CREATION

Pricelists were a feature of the legislated ECSC and European Union, but still provide an important commercial service for most types of flat product and grade

Hot rolled price list

Version 11/10/2005 - revised 22/06/2005

Hot rolled products

1. Base price

2. Pricing points

3. Extras

4. Structural steel

5. High strength Low Alloy steel

ThyssenKrupp Stahl
A company of ThyssenKrupp AG

PRICE LIST FOR HOT DIP ALUMINIZED SHEET PILE

1. Base price

2. Extras

2.1. Qualities

2.2. Extras

2.3. Length extras for cut lengths

2.4. Extras for small coils (widths up to 300 mm)

2.5. Extras for reduced dimensional tolerances

2.6. Extras for material testing certificates

Hot-rolled products

Basis price

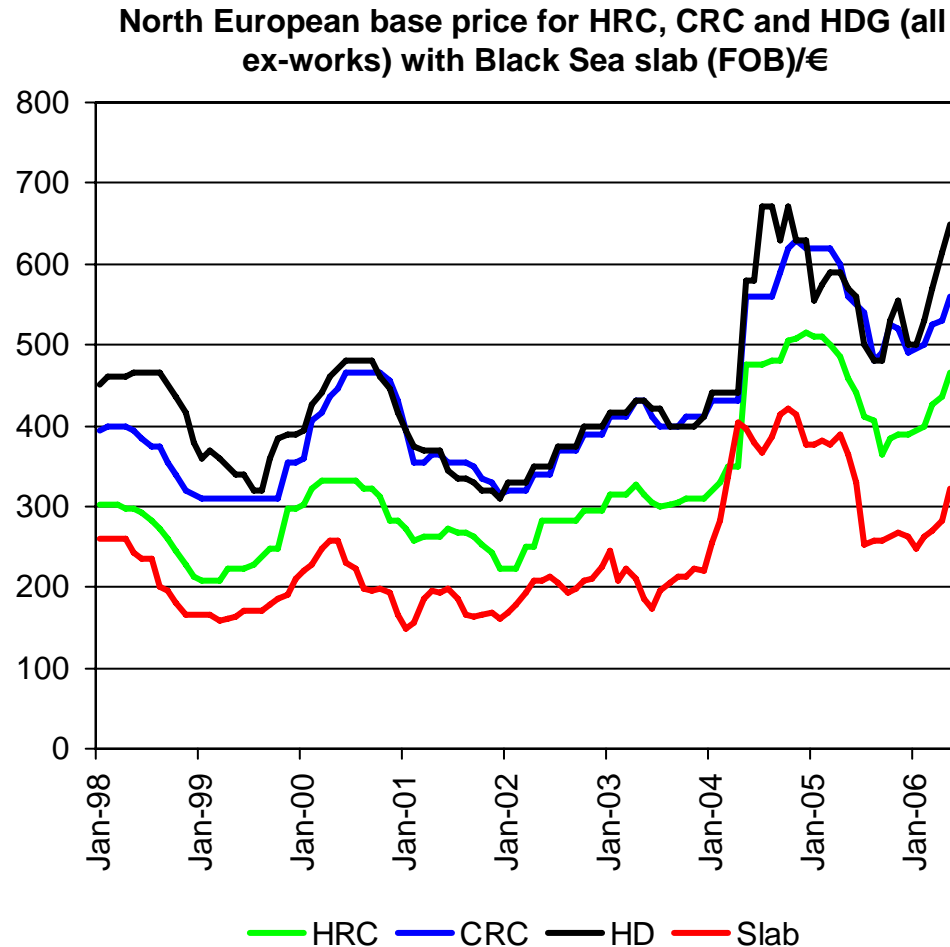
Hot-rolled products

Structural steel

High-carbon steel

Uniform carbon-manganese steel

The base price is important as a commodity market but attracts too much commentary - the value added available is often overlooked

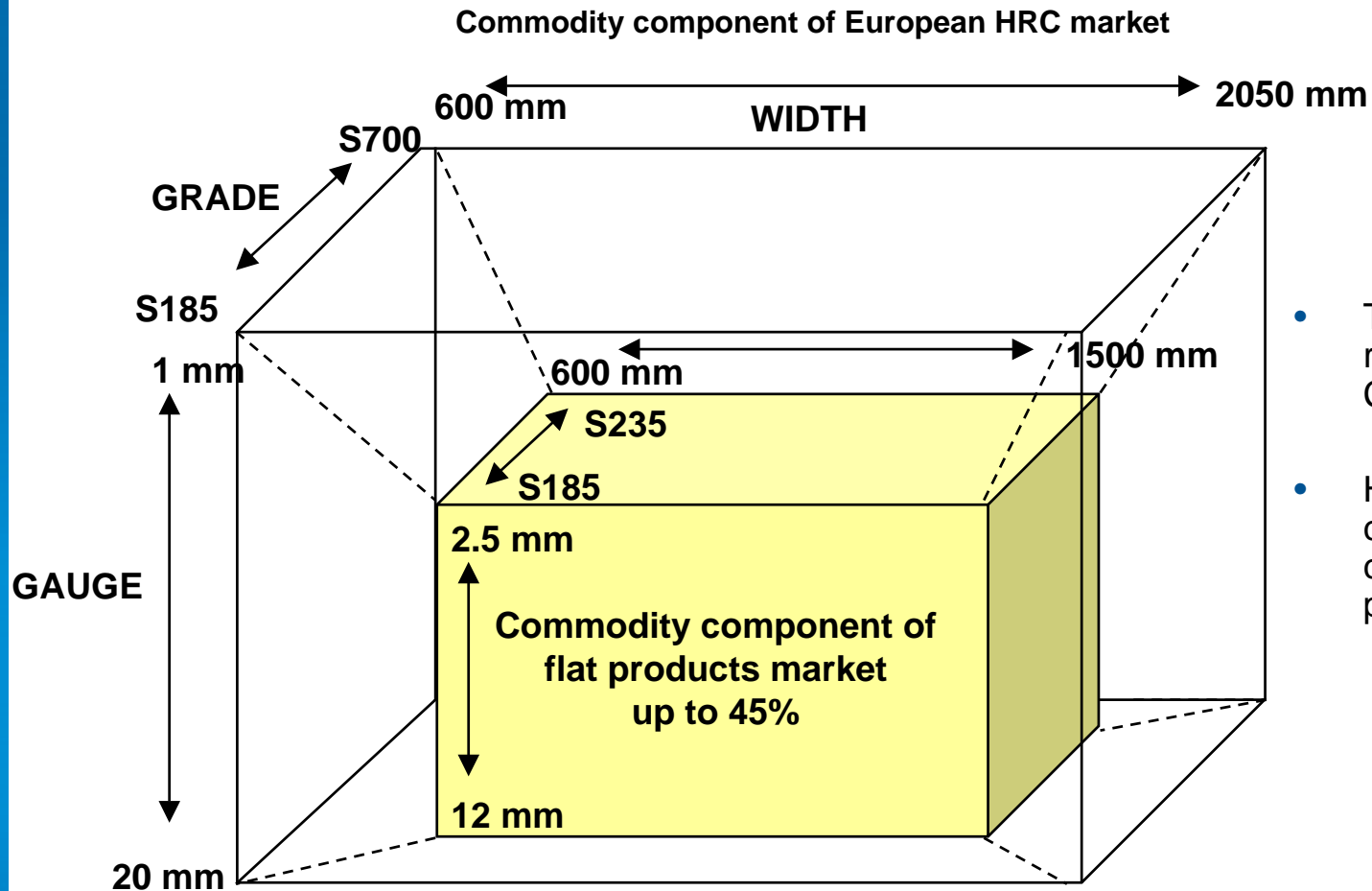


Source: Metal Bulletin, SBB and Hatch Beddows

For a mature world class steel producer, all products fall into two broad categories – commodity and non-commodity

- **Commodity steels,**
 - conform to a basic specification, but the final application is flexible and not pre-determined
 - this category of products often arise as a consequence of the “cascade” process and are produced for stock sales rather than customer order
 - this group of products are PROCESS DRIVEN
- **Non-commodity steels,**
 - are steels produced to respond to the specific requirements of a customer which may be relatively simple or extremely complex
 - in Europe, price lists are published which detail the choices available to customers and the cost of these choices and the attendant service package which accompanies these choices
 - functionality can be further refined into open and closed
 - **Open steels** are consistent with price lists and regional standards and of warranted quality. They are customer specifiable, made to order, ex-works with price list freight charges
 - **Closed steels** are designed in partnership with single customers and are the product of proprietary R & D collaboration – they dominate within automotive

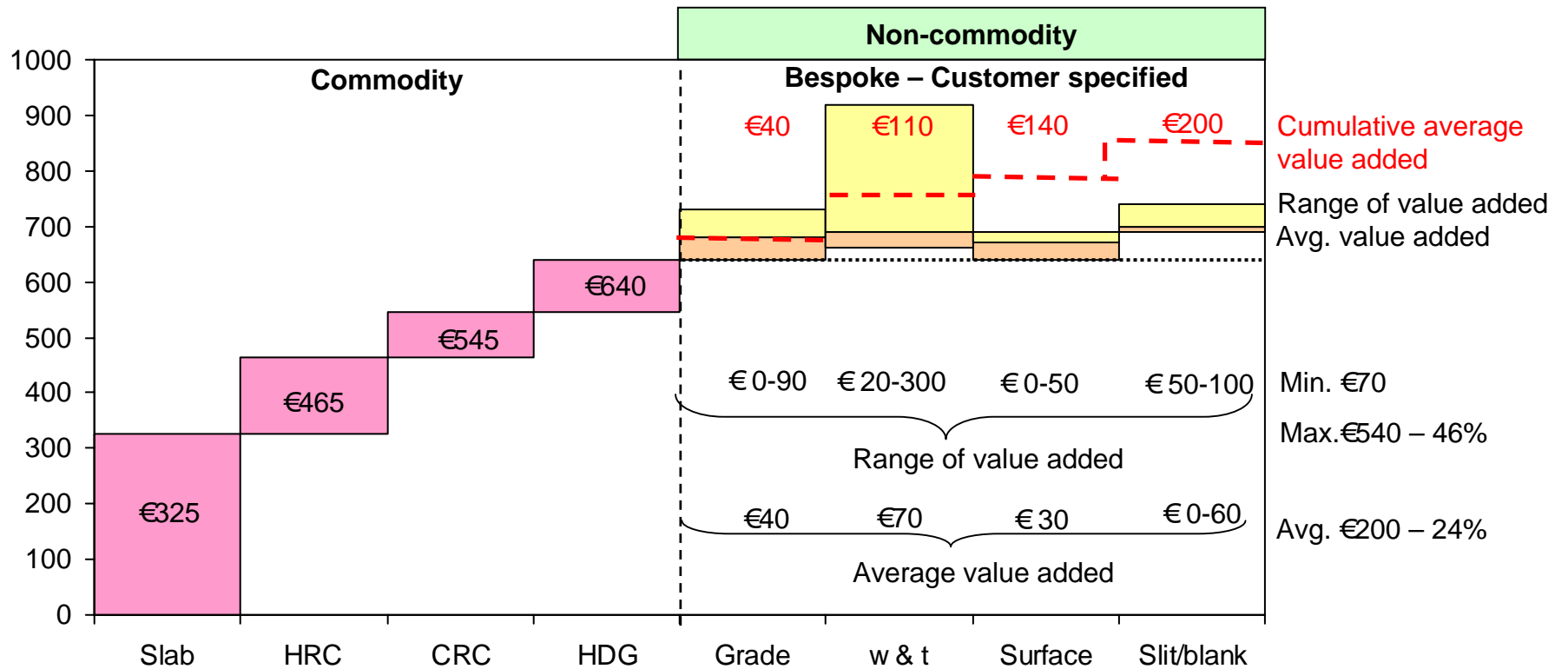
The commodity portion of the European flat products market can be defined across a 3 dimensional matrix which includes width, gauge and grade and constitutes about 40% of the market



- This is also representative for CRC and HDG
- However the commodity element is ca. 20 –25% for these products

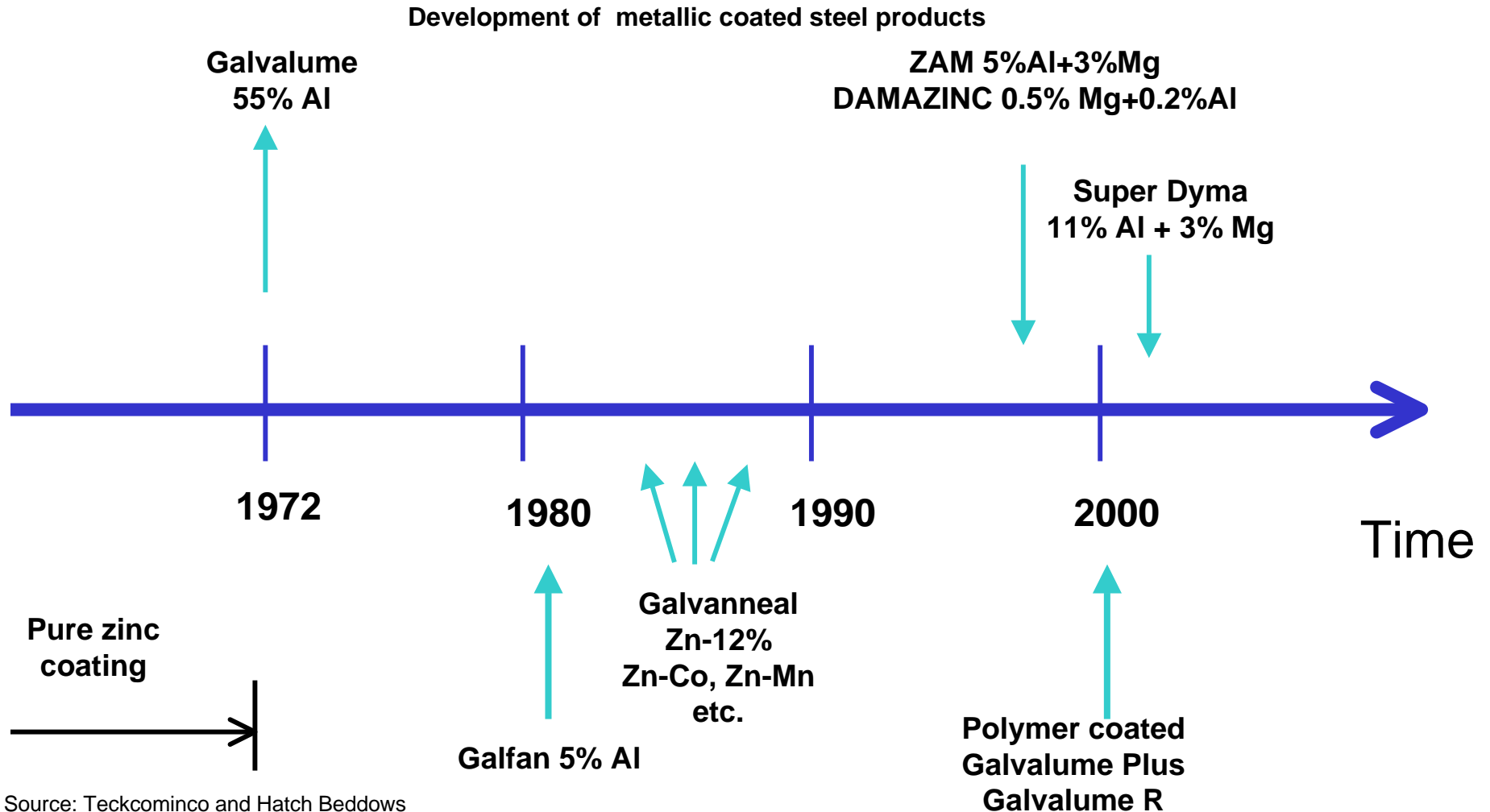
The value added available for most of the standard W. European HDG market is very significant – extracting such value requires good commercial and marketing acumen more than anything

Value chain for European HDG



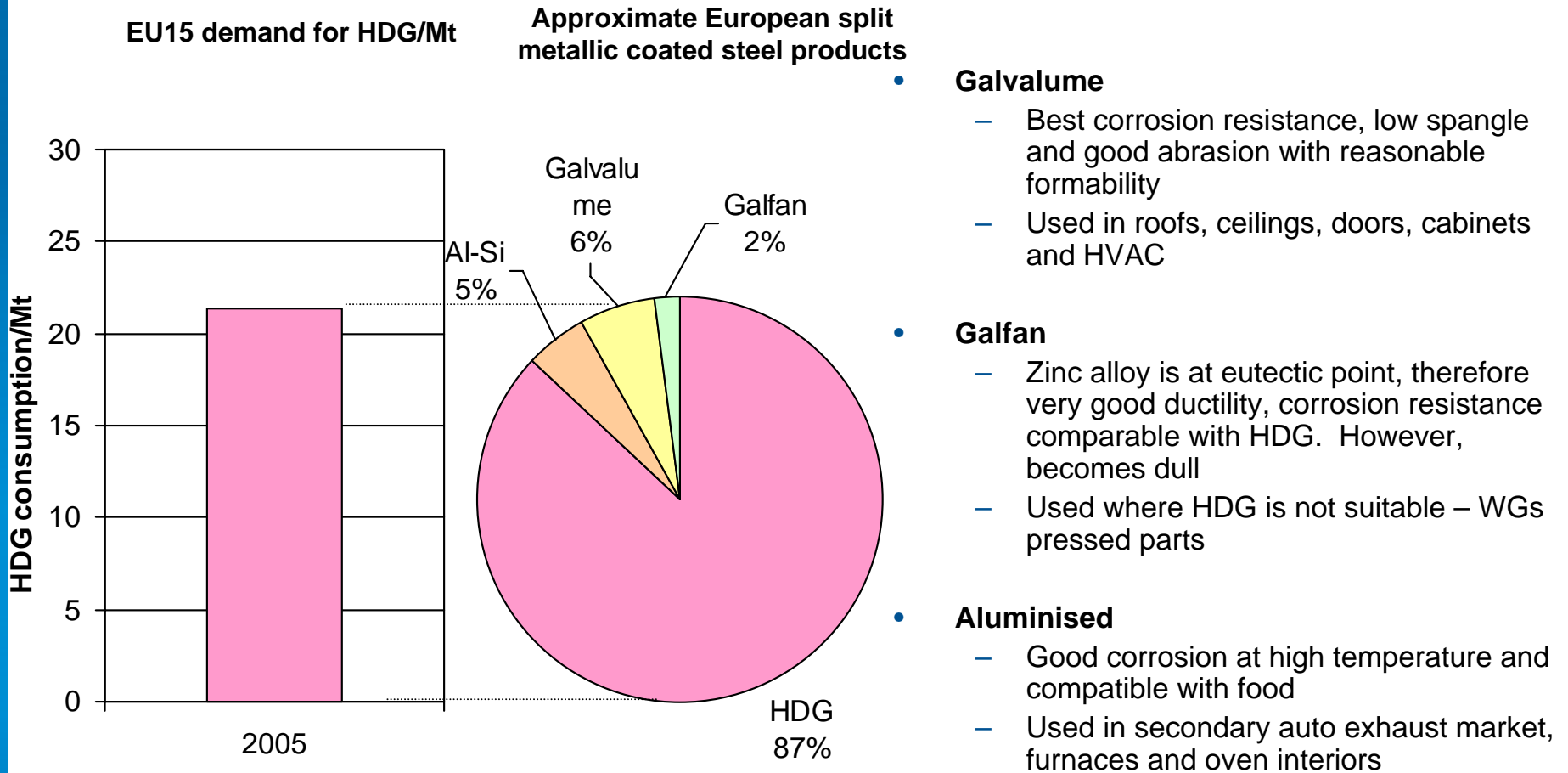
Source: Hatch Beddows

HDG, Galvanneal, Galvalume and Galfan are established coated products used throughout Europe – they are all standard coatings and are themselves commodity – Super Dyma may be the next technological advance?



Source: Teckcominco and Hatch Beddows

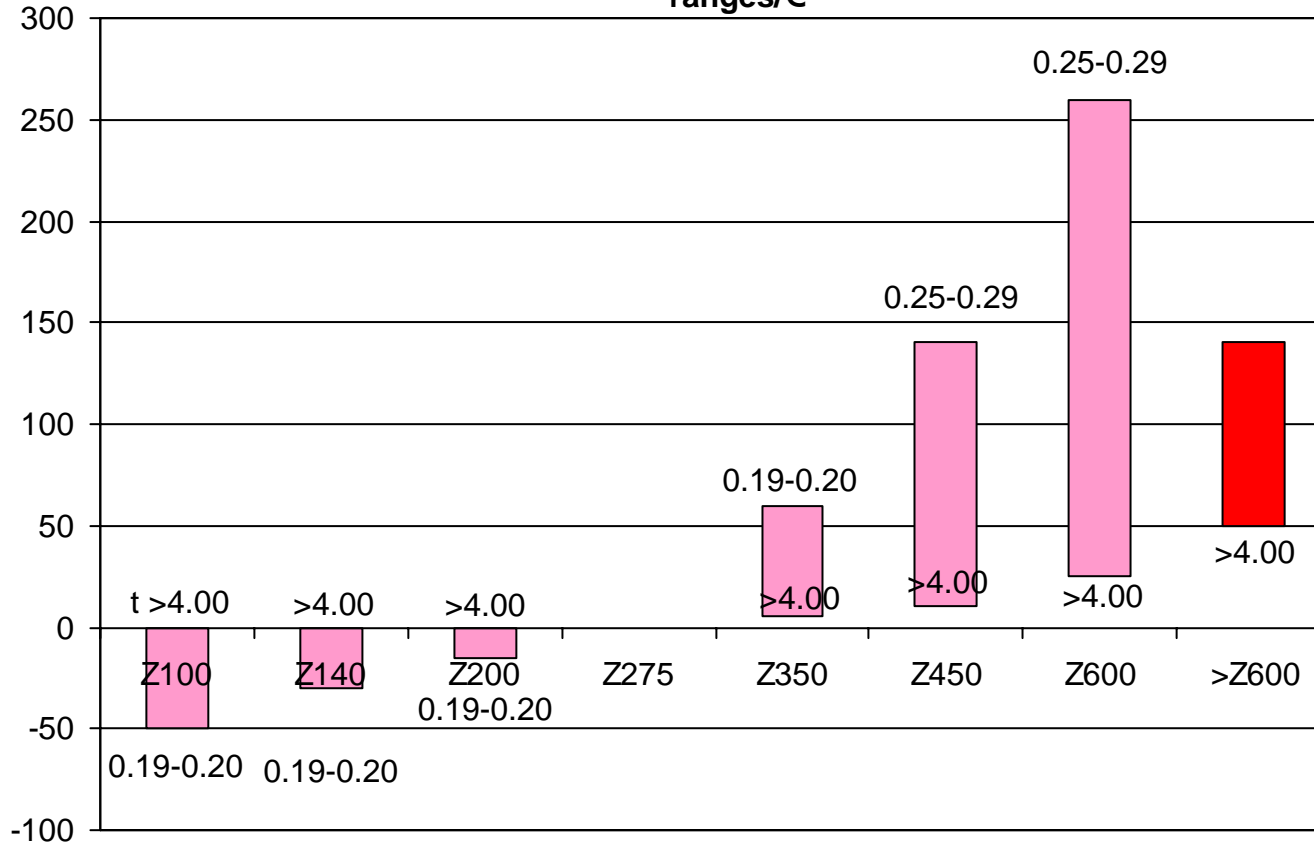
However, HDG remains the dominant metallic coated product within Europe – again, success arises from good commercial and marketing prowess, not necessarily engineering and technology



Source: Arcelor, BIEC and Hatch Beddows

Large premiums are available for different coating thicknesses

European extras for different metallic coatings with corresponding gauge ranges/€

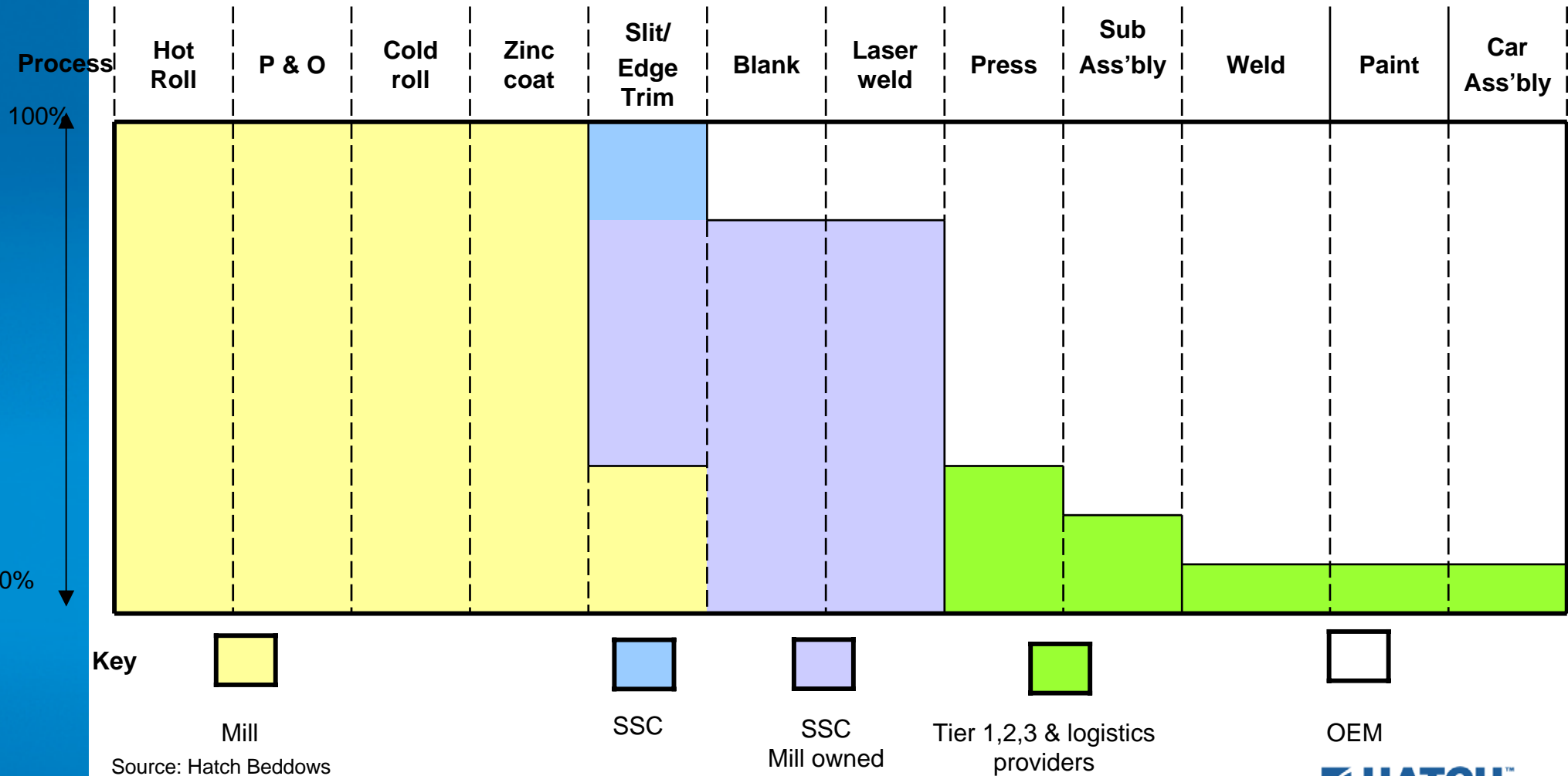


- Zxxx refers to the coating thickness in g/m²
- Standard coating for zinc based alloys is:-
 - HDG - Z275
 - Galfan - ZA200
 - Galvalume – AZ150

Source: TKS and Hatch Beddows

Positioning and understanding in the value chain is key – what role for wide coil?

Supply chain schematic for W. European BIW non exposed



Source: Hatch Beddows

The challenge in W. Europe is to maximise value within a highly competitive environment across a whole range of steel products that originate from world wide sources

- Consumers of steel, led by the automotive sector, are becoming regional and more demanding in terms of
 - lean production, value in use, low inventory and focus on core competences coupled to outsourcing
- The steel product profile has shifted from simple unprocessed commodity type traded steels to a highly specified supply chain managed processed package of products and services which are measured in units as well as tonnes
- In the early 1990s, the European steel industry recognised that their technical and processes were below world best standards (i.e. Japanese), the consequence of which was:-
 - a significant investment in R & D and processing equipment
 - a propensity to form technical alliances with Japanese companies
 - reinvestment and optimisation of assets were to global best practice e.g.
 - extra stands on cold mills, continuous annealing, variable surface galvanising lines
- Whilst these investments were product based they were made in parallel with the demands of European regional and global emerging auto transplant activity
- The consequence of supplying products and services which satisfy the demanding automotive sector is the ability to replicate this in other sectors on a value in use basis hence generating competitive advantage

The supplier - customer relationship has undergone radical transformation – the emphasis is now one of providing total satisfaction rather than supplying individual products, no matter how sophisticated

- The supplier customer interface was one of conflict rather than consensus and almost always driven by price with no recognition of the value in use of the product
- Successful steel producers became more aware of their own manufacturing limitations and the markets which they could and could not serve – they maximised their efforts on the former whilst exiting the latter
- Within the steel company's chosen strategic markets and capabilities, key potential customers were identified and targeted to become strategic accounts for which advanced packages of product and services were created and delivered
- These packages could consist of:-
 - specific steel products made to order
 - steel products processed and suitable for immediate end use
 - multi product, multi site deliveries
 - JIT delivery and other inventory management to minimise working capital
 - account management and customer relationship management (CRM)
- The commercial emphasis has become one of providing total satisfaction in a partnership rather than supplying individual products, no matter how sophisticated

Thank you

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