USIBOR1500P - Ultra High Strength Steel for Hot Stamping of Automotive Parts

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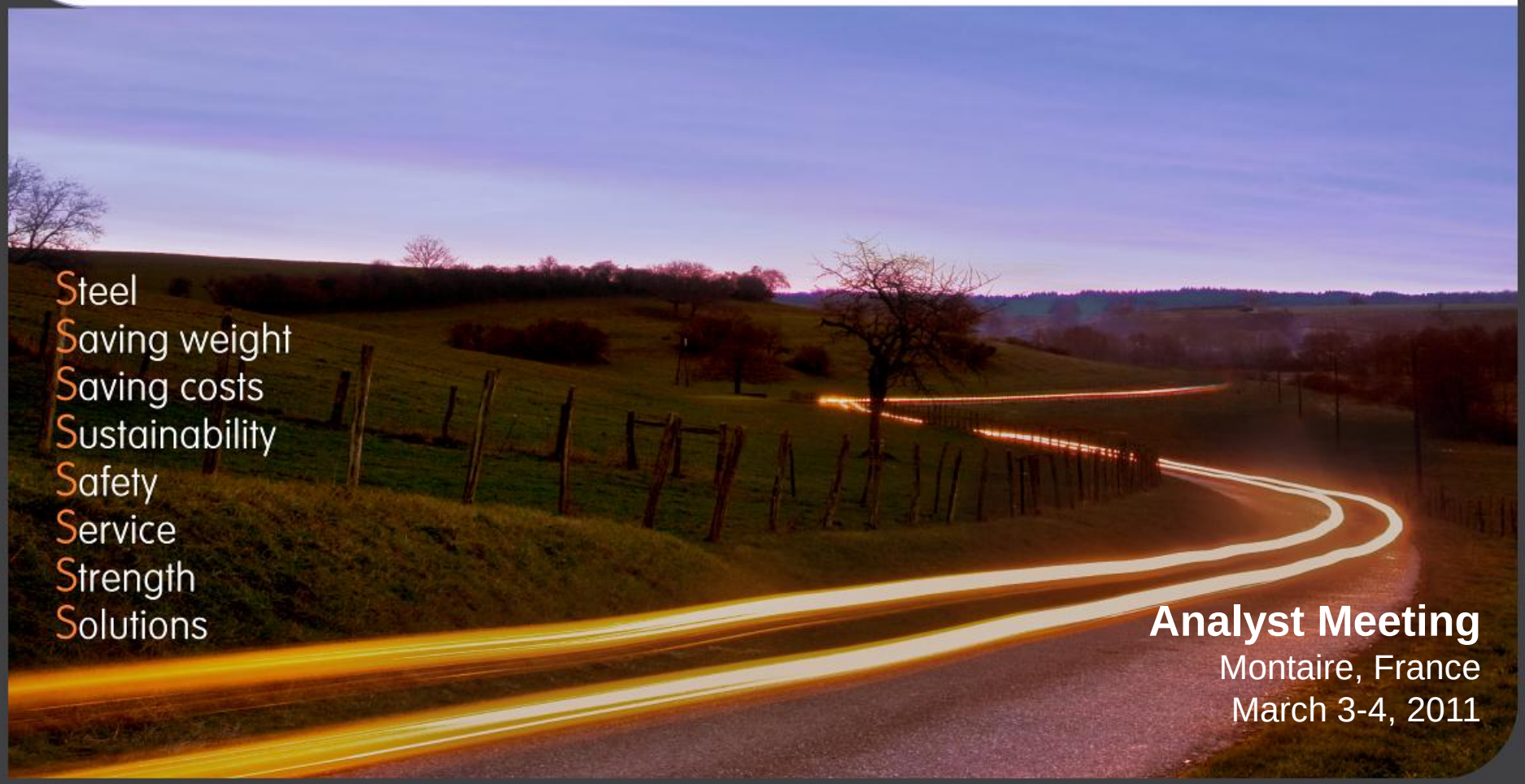
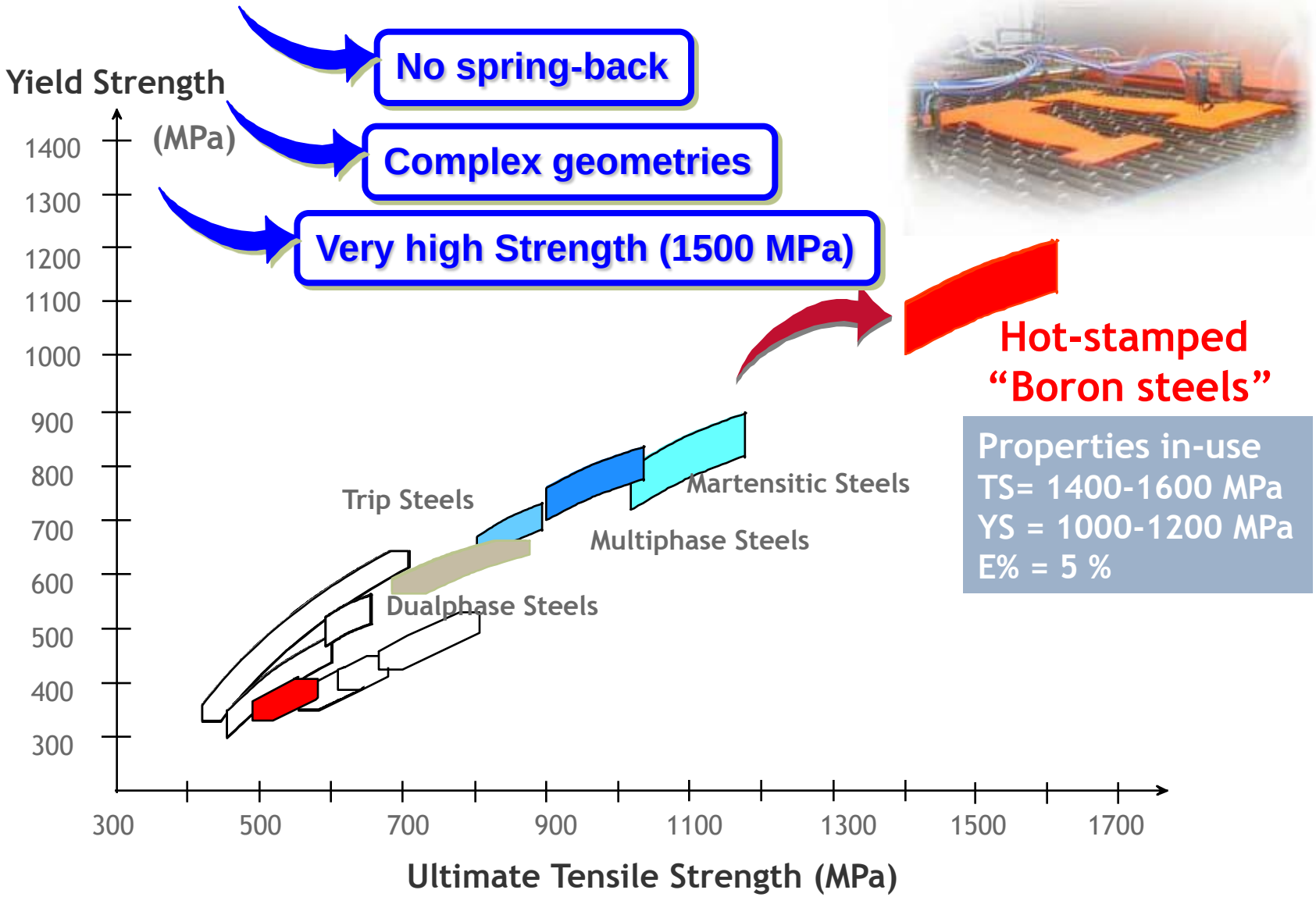


Analyst Meeting
Montaire, France
March 3-4, 2011

Main properties after Hot-Stamping



Which parts?

B- pillar

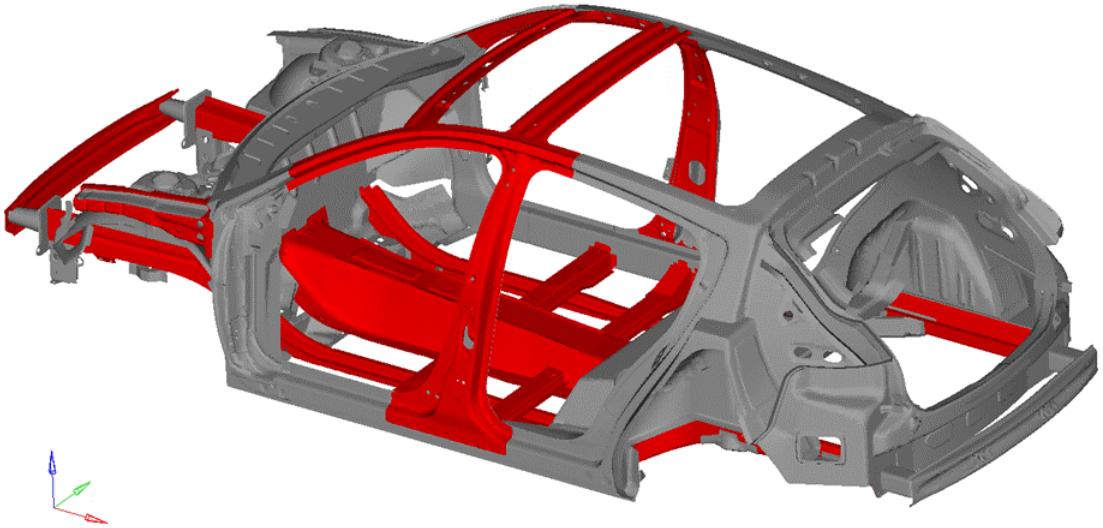
A-pillar

bumper

door beam

Anti intrusion parts

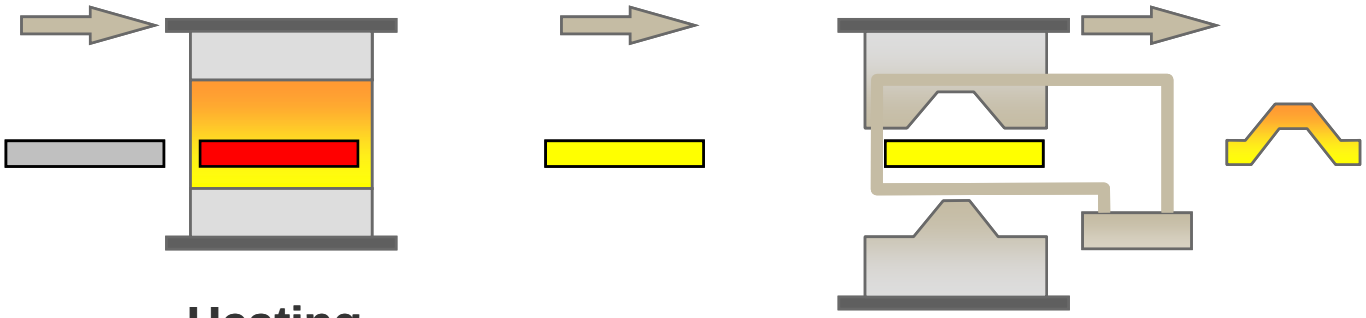
Lightening potential 30%
Increase in vehicle safety



Direct hot stamping process with pre-coated USIBOR1500P

Direct hot stamping process with pre-coated USIBOR1500P, first realized by French Company SOFEDIT (today TKS-SOFEDIT).

ARCELOR MITTAL developed the first serial hot stamping steel with metallic coating.



Heating
880 -930°C
3 – 10 min

Transfer
< 7 sec

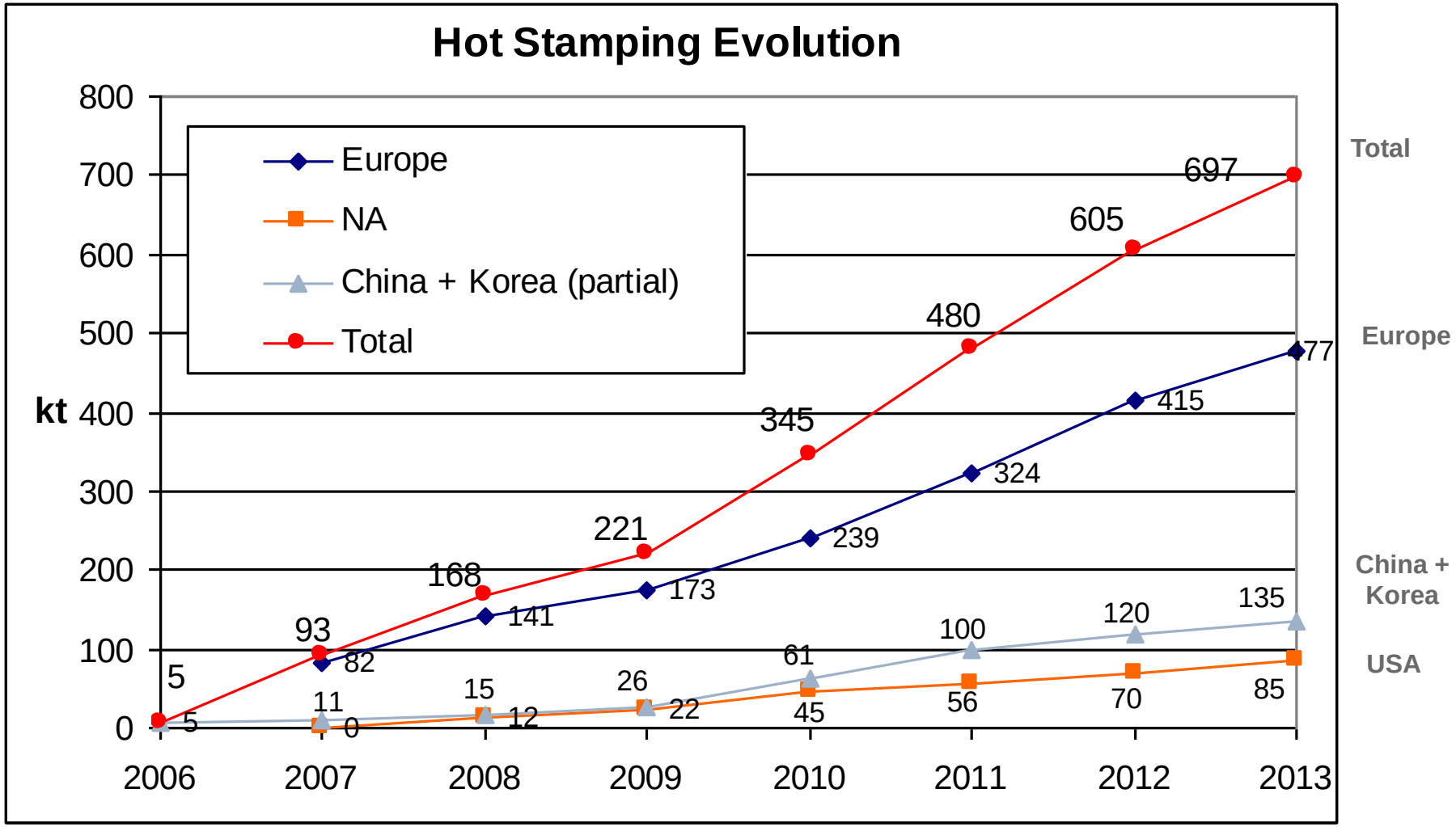
Stamping (600 -800°C)
+ Hardening (>> 50 K/s)

AlSi coating

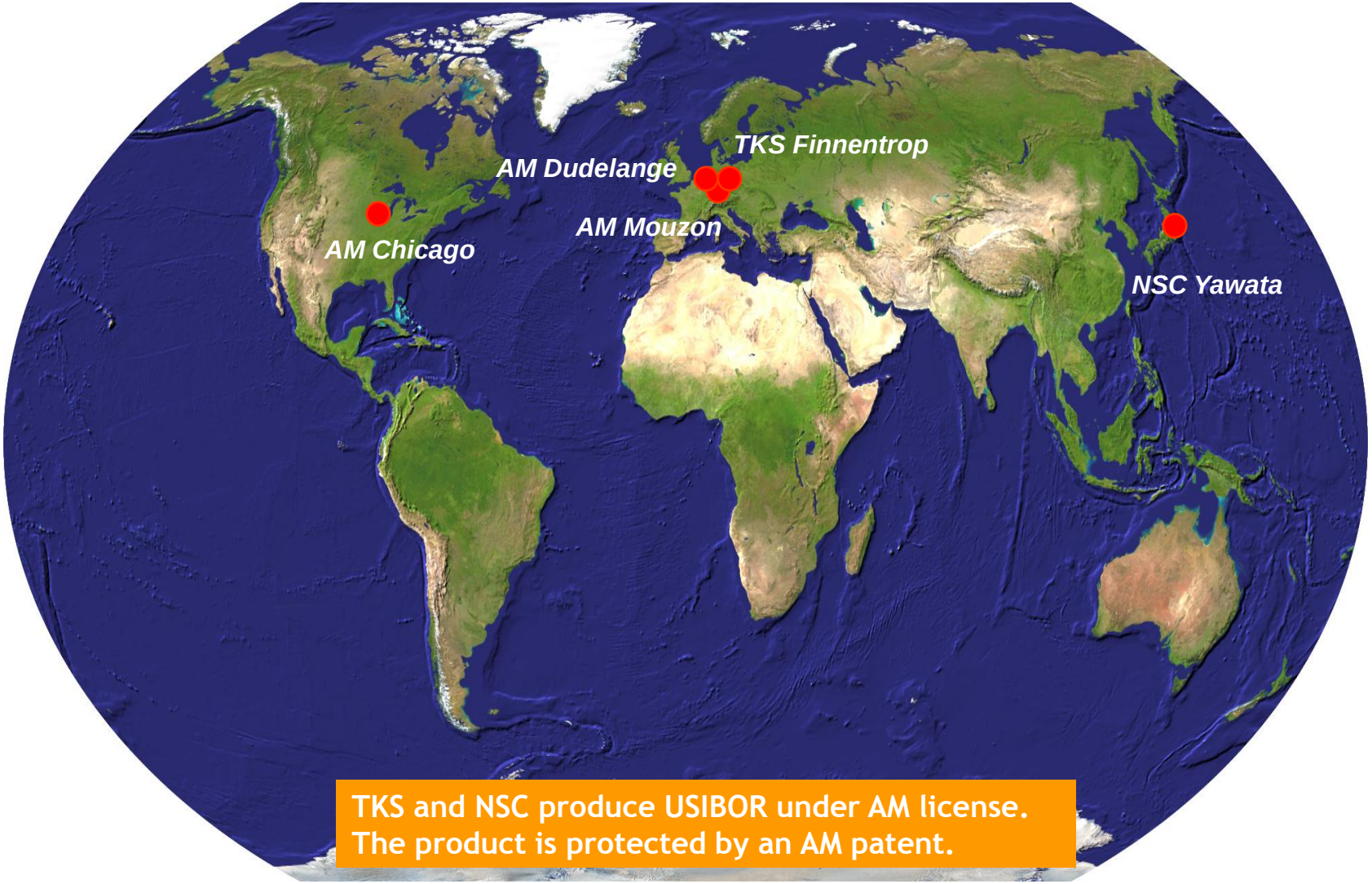
No cold forming
No scale formation
No sandblasting
Excellent geometrical accuracy
Very good corrosion protection

The AlSi coating makes part production much easier and leads to an impressive increase in hot stamping lines and hot stamped parts for automotive application. Some OEM started to do hot stamping themselves.

Evolution of coated Boron Steel in Europe, China + Korea and USA



USIBOR Production sites.



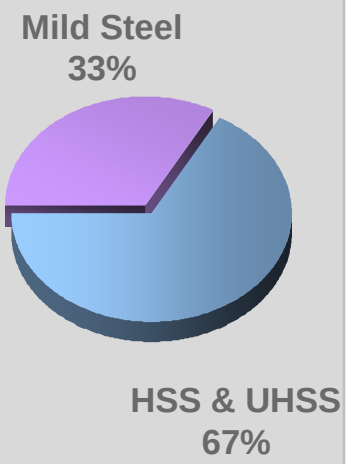
TKS and NSC produce USIBOR under AM license.
The product is protected by an AM patent.

AHSS Growth Illustration by Fiat

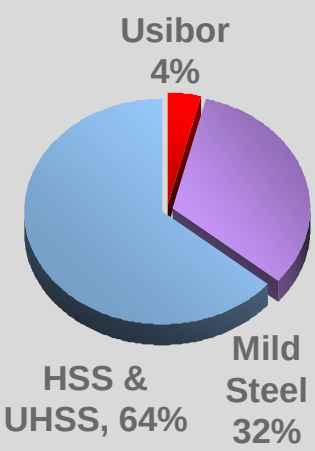
ArcelorMittal

Materials Strategy - % in Weight

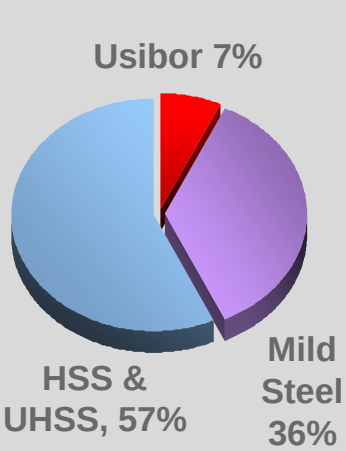
Grande Punto



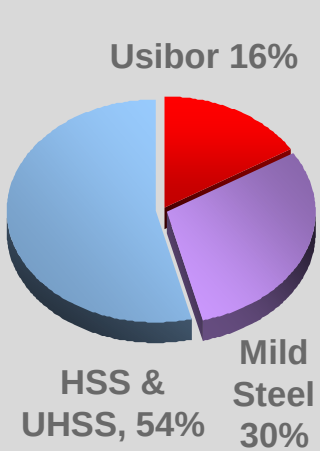
Bravo



500



Giulietta



Courtesy Mr Maggi (Fiat)