



Trucks & Trailers



1 Description and advantages

NLMK Europe proposes a large range of Advanced High Strength Steels (AHSS) dedicated for Trucks and Trailers industry for earth moving and mining equipment. Their use is recommended where high resistance is needed and to prevent accelerated fatigue in severe environments. They offer good formability properties. The high potential of these steels facilitates the development of innovative designs.

The **AHSS** steels proposed by NLMK Europe for Trucks and Trailers industry include the following grades:

- for cold forming:
 - DUAL PHASES steels (DP);
 - FERRO BAINITIC steels (FB);
 - High RESISTANCE steels (HR).
 - High Strength low ALLOYED (HSLA);
- for heat treatment:
 - HIGH CARBON steels;
 - BORON steels;
 - ALLOYED steels.

NLMK Europe proposes also **other steels** for specific use in the structure or as component:

- Steels for visible parts (MS/DD/RP/BH);
- DRYZINC for improved forming;
- QUARD for abrasion resistance;
- Extra deep drawing steels for heavy forming.

2 Product and service range

To meet all your requirements, NLMK Europe proposes a very large range of products and services:

- Lingots and Heavy plates;
- Hot Rolled (HR) products;
- Cold Rolled (CR) products;
- Electro-Zinc (EZ) products;
- Hot Dip Galvanised (HDG) products;
- Organic coated products;
- Integrated Steel Service network.

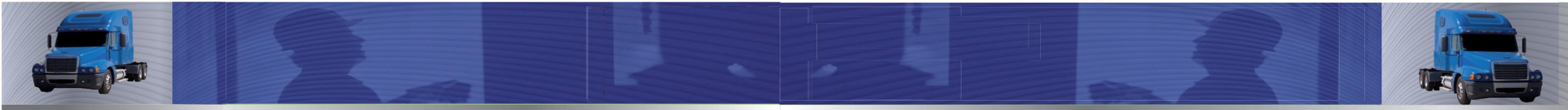
3 Standards and specifications

Without particular requirement of the user, our products are processed according to Euronorm standards. On your request, our specialists will elaborate the material according to your own technical specifications.

Quality Certifications within the Group :

- ISO 9001 for La Louvière, Clabecq, Strasbourg & Beator
- ISO TS 16949 for La Louvière, Strasbourg & Beator
- ISO 14001 for DanSteel A/S, Strasbourg et Beator
- ISO 18001 for Strasbourg





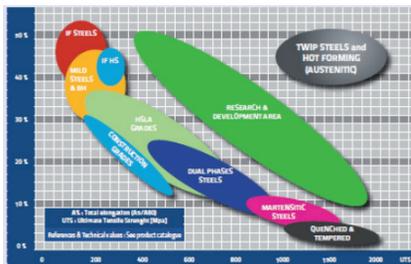
ADVANCED HIGH STRENGTH STEELS (AHSS)

Uses:

- recommended for **cold forming** applications;
- when energy absorption, fatigue and weight performance must be achieved.

Grades:

- DP450 - DP500 - DP600;
- HR45 - HR55 - HR60;
- FB 590;
- S460MC - S500MC - S550MC;
- S600MC - S650MC - S700MC.



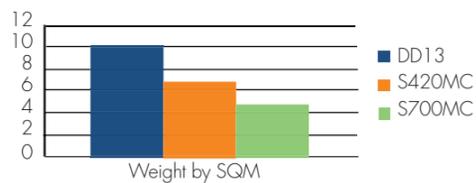
HIGH STRENGTH LOW ALLOYED STEELS (HSLA)

Uses:

- recommended for **cold forming** applications;
- when weight reduction and also higher resistance is needed.

Grades:

- S315MC - S355MC - S420MC;
- HC340 - 380 - 420LA.



MILD STEELS AND EXTRA DEEP DRAWING STEELS (MS/DD)

Uses:

- when deformability is linked to extreme and severe design and/or applications.

Grades:

- DD11 - 12 - 13 - 14;
- DC01 - 04 - 05 - 06;
- Rephosphorised;
- Bake Hardening.

INNOVATION IN STEEL

for **TRUCKS AND TRAILERS**

TRUCKS AND TRAILERS APPLICATIONS

Chassis, cabins and visible panels	S355 - S420 - S500 - S550 MC BH 220 / RP 280 / Dual Phases
Powertrain, suspensions, and braking systems	Powertrain : 22Mnb5 - S420 MC cold forming Fe590 FB - S500MC Braking systems : S355 - S420 - S500 MC
Seats	H 340 - 380 - 420 LA
Security parts	Side impact beams : DP 600 Bumpers : S355MC - DP 600 - DP800
Wheels	HR45/HR60
Mechanisms	Clutches : 51CrV4 Articulations : S355 - 420 - 460 MC
Trailers	S355 - S550 - S700 MC
Add-on units	HSLA Grades / Wear resistant
Cement mixer	S 700 MC / Boron steels

WEAR RESISTANT STEELS

Uses:

- when wear abrasion requires direct use of high hardness sheets and plates.

Grades:

- QUARD 400 - 450.

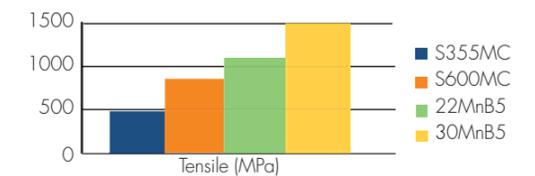
CARBON, BORON AND ALLOYED STEELS

Uses:

- recommended for **heat treatment** operations and **hot forming** applications;
- when extreme resistance to wear and also energy absorption must be reached.

Grades:

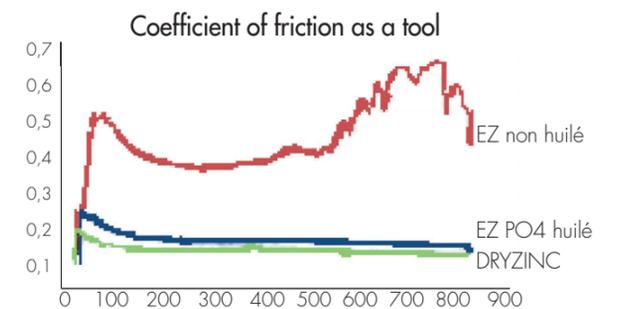
- C40 - 45 - 50 - 55 - 60;
- 20 - 30 - 38MnB5;
- 27 - 33 - 39 MnCRB5;
- 25 - 34 - 42 - 50 CRMO4;
- 51CRV4.



SPECIFIC PRODUCTS : DRYZINC

Technical innovation for improved production costs and feasibility. Dryzinc has been specially developed for improving feasibility of difficult designed part and tested and approved by major company in Europe.

- Organic coated steels;
- Dryzinc for improved deformation of our steel range.





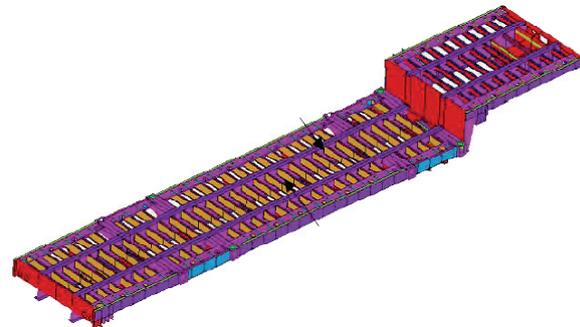
3 Technical information

As the workability differs from steel to steel, it is recommended to observe elementary precautions and to strictly follow the instruction given in the norms and in the technical guides before using advanced techniques for cutting, welding, forming, ...

Use and processing of Advanced High Strength Steels (AHSS) in substitution of conventional mild or low alloyed steels is subjected to prior analysis, such as static and dynamic calculations or energy absorption simulations.

Specific material as Dual Phases are subjected to work hardening (Wh0.2) during forming operations. Others as BH220 are subjected to Bake Hardening effect during painting.

Our technical experts are at your disposal for any demand or requirement. Read more about technical aspects in the individual product datasheets available via our website or through our sales representatives.



5 Contacts

Our experts stay at your disposal to propose you the right answer to your needs. Don't hesitate to contact them at the sales and production headquarters:

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4 Network



Thanks to an proven and well established production and distribution network, we bring you the global solution for your global activities.

Moreover, we can reply on of a precise and ponctuous delivery wherever you want in Europe and in the rest of the world.

You can also contact directly the company of your choice:

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