

# MICROALLOYED STEELS

## 20MB5 | 24MnV6



### Pre-treated microalloyed wire rod for fasteners and bolted joints

#### APPLICATION:

- Pre-treated steel wire rod for **fasteners and other components for bolted joints** than can be cold formed and used without final heat treatment.

#### ADVANTAGES:

Grade 8.8 requirements →

800-1000 MPa.

No final heat treatment →

Quenching and Tempering is not required after cold heading.

Economical savings →

Up to a 15% less expensive.

#### APPLIED TECHNOLOGY:

- Controlled cooling wire rod to obtain ductile ferrite-pearlite and cold deformation (cold drawing plus cold heading) to attain the grade 8.8 or 10.9 properties.
- Final microstructure: highly deformed ferrite-pearlite.

# MICROALLOYED STEELS

## 20MB5\_24MnV6



### DENOMINATION:

EN	SIDENOR den.	AFNOR	UNI	ASTM	JIS
20MnB5	20MnB5				
24MnV6	24MnV6				

### CHEMICAL COMPOSITION:

Steel grade	%C	%Mn	%Si	%P <sub>máx</sub>	%S <sub>máx</sub>	%Al	%V	B (ppm)
20MnB5	0,18/0,22	1,10/1,40	0,20/0,35	0,025	0,010	-/-	-/-	10/50
24MnV6	0,20/0,28	1,00/1,60	0,25/0,75	0,030	0,030	-/0,050	0,08/0,15	-/-

### MANUFACTURING PROCESS / SUPPLY CONDITIONS:

Continuous casting billet.

Format	Ø (mm)	Heat Treatment	Microstructure
Wire rod	From 5,5 to 18	Controlled cooling	Ferrite-pearlite

### MECHANICAL PROPERTIES:

Grade	UTS (MPa)	YS (MPa)	El <sub>5d</sub> (%)	Z (%)	AGS ASTM
20MB5 (as rolled)	<700	>340	>25	>65	8
24MnV6 (as rolled)	<800	>450	>20	>60	8

