



SS Canada
SPECIAL STEEL INC

TFMS 13B

LASER CLADDING HYDRAULIC
COLUMN REPAIR



In fully mechanized coal mining operations, hydraulic supports are one of the most commonly used pieces of mechanical equipment. Using hydraulic supports to support the roof improves the safety of coal mining operations.

However, the working conditions in underground coal mines are harsh, posing a significant challenge to the wear and corrosion resistance of hydraulic supports, especially in the humid underground environment containing corrosive media such as Mg^{2+} , SO_4^{2-} , HS^- , and Cl^- .

TFMS13B, as a stainless steel, has high hardness and wear resistance, and also possesses superior corrosion resistance compared to TFMS13A, with a laser cladding hardness of 48-52 HRC. Compared to traditional hard chrome plating, TFMS13B laser cladding offers better corrosion and wear resistance, helps reduce total cost of ownership by extending service life, and has a smaller environmental impact.

Range of chemical composition

C	Cr	Ni	Mo	Mn	Si
≤0.17	≤19.0	≤2.60	≤0.60	≤0.35	<1.2

Physical properties

Granularity range	53-150 μm
Hardness	50 -52 HRC
Hallflow rate	≤16 s/50 g
Loose packing density	4.34 g/cm ³

Corrosion resistance test

Neutral spray test GB / T 10125 - 2021	4000
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