



VM-105 DP MS

a VAM Drilling Sour Service solution

“Sour Service” refers to a well environment containing Hydrogen Sulfide (H₂S), which is hazardous to human health and could impact significantly on steel drill pipe performance.

VAM Drilling has developed proprietary grades conforming to industry standards and maximizing safety and performance for sour drilling. **VM-105 DP MS** is one of those proprietary grades.

▷ Product added value

A specific steel chemistry

Grade	%	C	Si	Mn	P	S	Cr	Mo	Ni	Cu
VM-105 DP MS	Min						0.70	0.25		
	Max	0.38	0.40	1.20	0.020	0.010	1.40	0.85	0.27	0.37

Controlled heat treatment

To achieve good performance, pipes are heated to a suitable austenitizing temperature, followed by an adjusted quenching. Pipes are then properly tempered to provide homogeneous properties and a specific fine grain microstructure ensuring a good resistance to Sulfide Stress Cracking (SSC).

▷ VM-105 DP MS specification

Technical Name		VM-105 DP MS	
Sour Domain		Mild Sour	
Pipe Body			
Yield Strength (Min - Max)	724 - 828 MPa	105 - 120 ksi	
Tensile Strength (Min)	794 MPa	115 ksi	
Controlled Hardness (Average Max)	29 HRC	29 HRC	
Controlled Hardness (Single Max)	31 HRC	31 HRC	
Charpy Impact Value (Single Min at room temperature, standard size 10 x 10 mm ²)	47 J	35 ft-lbs	
Material Type	H ₂ S	H ₂ S	
NACE Tests	None	None	
Tool Joint			
Yield Strength (Min - Max)	828 MPa	120 ksi	
Tensile Strength (Min)	966 MPa	140 ksi	
Hardness (Single Min)	285 BHN	285 BHN	
Material Type	API	API	
NACE Tests	None	None	

VM-105 DP MS is well adapted to mild sour environment, where materials are submitted to low levels of corrosion due to H₂S.

Not only **VM-105 DP MS** grade is fully compatible with API 5D and API 7 specifications but thanks to its special chemistry, it is more resistant than standard G-105 grade.

