



VM-65 HW MS

a VAM Drilling Sour Service solution for HWDP



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

VAM Drilling has developed proprietary grades conforming to industry standards and maximizing safety and performance for sour drilling. **VM-65 HW MS** is our proprietary grade for **heavy-weight drill pipe in mild sour environments**.

► Product Added Value

A specific steel chemistry

Grade	%	C	Si	Mn	P	S	Cr	Mo	Al	
Central Part	Min	0.38	0.15	1.60	-	-	-	0.18	-	
	Max	0.43	0.30	1.90	0.015	0.005	-	0.25	-	
VM-65 HW MS	Tool Joint	Average	0.40	0.28	0.83	0.006	0.002	1.3	0.65	0.025

Controlled heat treatment

After hot rolling, pipes are heated to a suitable austenitizing temperature, followed by quenching to achieve a martensitic structure. After quenching, pipes are tempered at a minimum of 1200°F (650°C). This heat treatment provides homogeneous properties and a fine grain microstructure ensuring an excellent resistance to Sulfide Stress Cracking (SSC).

► VM-65 HW MS Specification

Technical Name		VM-65 HW MS
Sour Domain		Mild Sour
Central Part		
Minimum Yield Strength		65,000 psi
Minimum Ultimate Tensile Strength		95,000 psi
Minimum Elongation		18%
Controlled Maximum Hardness		22 HRC
Charpy impact Min. Average @ 75°F		31 ft-lbs
Material Type		AISI 1340
NACE test		None
Tool Joint		
Yield Strength		110,000 psi - 125,000 psi
Minimum Ultimate Tensile Strength		140,000 psi
Controlled Maximum Hardness		36 HRC
Charpy impact Min. Average @ 75°F		48 ft-lbs
Material Type		ERS 425
NACE Test		None

VM-65 HW MS is well adapted to mild sour environments, where materials are subjected to low levels of corrosion due to H₂S.

Not only is **VM-65 HW MS** compliant with API specifications but, thanks to its special chemistry, it is more resistant than standard HWDP grades due to the restricted hardness.

VAM Drilling can propose a field procedure dedicated to your Sour Service needs. This procedure describes the precautions to be taken before, during and after running Sour Service drill pipe in order to evaluate your pipes' performance in real conditions.

