

ASTRALLOY SOLUTIONS

Astralloy-V[®] Bar

"We currently use the Astralloy-V Bar for the downhole motor and we've noticed it works better than the 4330 and 4340."

– Valued Customer



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The best place to use the Astralloy-V® Bar is in the drive shafts/bearing mandrels on the motor assembly. This application takes extreme torque, twist and flex. The through-hardness of the Astralloy-V provides a good wear surface for the bearings in the mandrels. This works well in other applications, and performs exceptionally well where downhole motors are being used for directional drilling; outperforming all the others.

TECHNICAL SPECIFICATIONS

Astralloy-V® is a unique, deep air-hardened steel that is rich in chemical composition and physical properties. It is through-hardened and unsurpassed in resistance to impact and abrasion. With continuous impact and abrasion, Astralloy-V can reach a hardness in excess of 550 BHN without brittleness.

SOLUTION

The greatest benefit of the Astralloy-V Bar solution from Astralloy is the longer service life it provides for directional drillers. This product delivers the greatest strength of any material in this application. The longer a drilling motor works, the more distance that can be drilled at one time. From a repair standpoint, the Astralloy-V Bar holds up and does not have to be replaced as often.

Chemical Composition* – % Weight							
C	Mn	P	S	Si	Ni	Cr	Mo
.29	1.05	0.015	.010	.35	3.90	1.75	.45

Physical Properties – Typical Values at 68°F				
BHN Hardness	Tensile Strength	Yield Strength	Elongation in 2"	Charpy Test Toughness Index
320 – 388	175 ksi	153 ksi	15%	27 ft. lbs. @ RT

- ### Benefits
- * Uniform hardness throughout the mass (340 BHN) to resist abrasion and promote slidability, and toughness to absorb impact without cracking.
 - * Maintains its toughness and hardness without brittleness at temperatures of up to -75°F (-60°C).
 - * Hardenability in the range of 550 BHN by impact or sliding action, without deformation or brittleness.
 - * Astralloy-V's small oxide surface quickly disappears, exposing a slick, durable surface.
 - * Can be hot worked and allowed to air cool without loss of hardness or toughness and without warpage problems.

Note: The data contained in this document is accurate at time of printing, and intended for use as a general guide.
* Typical maximum values. Mill certifications are available upon request.



Call Us Today to Discuss Your Optimal Solution for Your Downhole Motor Project.

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