

ASTRALLOY SOLUTIONS

# Astralloy-V<sup>®</sup> Pins



*“After using OEM pins consisting of 4340 material, we have switched to Astralloy-V Pins and are very pleased with their significantly longer life.”*

— Valued Customer

[www.astralloy.com](http://www.astralloy.com)





# Astralloy-V® Pins

Astralloy-V® Pins act as a mechanical connection point between two components; pins are used in latch bar insert blanks and Dutchman insert blanks to slow wear on the latch bars, thus prolonging their life compared to simply using latch bar material. Additionally, pins can be used in the boom point to hold the boom onto the shovel. They can also be used in track shoes. In the shoes, pins often experience quite a bit of rotation; these pins need to have slow wear properties to help keep the entire system from growth and jumping off the drive tumbler. Growth in the belt changes the tooth pitch of the tumbler and fails to catch properly in the “chain links”.

## 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

Astralloy-V Pins will outlast pins made out of EN30B by at least 25% and will increase the wear life of pins made from 4330 by as much as 30%. Other steel pins have failed in service due to cracking from the harsh environment and repeated fatigue cycles. With Astralloy-V’s superior chemistry and work hardening surface, the pins will endure the harsh environment while maintaining a high surface-to-core hardness.

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.



Obtain Optimal Wear Life on Your Pins – Call Us Today:

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