

Starrett®

Cut Metal Not Your Budget

Cost-Effective Solutions to Heavy-Duty Cutting Applications



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Problem Statement

M42 Bi-Metal Band Saws work well cutting general-purpose metals such as aluminum, nonferrous metals, alloy steels, carbon steels, stainless steels, structural steels, and tool steels; whereas Primalloy Bi-Metal Band Saws are intended for more difficult cutting materials such as precipitation hardening stainless steels, high alloy tool steels and nickel alloys. Over time and through frequent use on tough to cut materials, M42 edge blades cut less accurate, have less operational life, and are inefficient. Furthermore, frequent blade changes due to slower cutting and performance increase overall operating costs.

Solution

The Primalloy Saw, manufactured by L.S. Starrett Company, is designed for heavy-duty cutting applications. The cutting performance of the high-speed steel is greatly increased through alloying with cobalt and vanadium. These alloying elements substantially increase the heat resistance as well as the wear resistance. The Primalloy Saw provides superiority in overall wear and operating life without the expense of carbide-tip solutions.

The Primalloy product line will also have a proprietary Extended Life Treatment (EXT) applied to the alloy steel backing material. This process increases the fatigue life of the blade. Both X-Ray Diffraction (XRD) and extensive mechanical fatigue tests have proved the benefit of EXT. This process will soon be applied to most Starrett bimetal and carbide tip product lines.

With Primalloy edge and EXT functionality, the Primalloy Band Saw minimizes blade replacement thus cutting costs resulting in steadier production.



Benefits of Primalloy

- Longer operating blade life due to tooth tip chemistry
- Increased cutting accuracy
- Improved efficiency over the all-purpose M42 HSS Edge Band Saw
- Cost-effective cutting solution for steels with low machinability
- Three times the Vanadium content dramatically increases wear resistance over competitive products. Vanadium carbides in the microstructure have a hardness of HRC 84!
- Ground teeth are effective for the hardest steels and alloys of all dimensions
- 10% cobalt tool steel cutting edge provides excellent heat resistance
- Starrett extended life treatment (EXT) applied to alloy steel backing material ensures maximum fatigue life
- Primalloy Edge provides higher edge hardness, up to HRC 69, over competitive M42 products
- Faster cutting rates due to aggressive 12 degree tooth form
- Primalloy will be beneficial on machines not rigid enough for carbide tip product

Applications

- For abrasive wear applications
- For heavy-duty cutting applications
- For difficult to cut materials
- Tool steels
- Heat treated alloy steels such as 4340 and 4150
- Mold steels
- PH Series Stainless Steels
- Inconel

Competitive Analysis

The Starrett Primalloy Band Saw out cut the competition 2-1 in durability and accuracy.

Conclusion

In summary, the L.S. Starrett Primalloy Saw is an excellent choice for cost-effective production cutting of solid or heavy walled materials that have work hardening or abrasive characteristics such as nickel alloys, austenitic stainless steels, and tool and die steels without the expense of carbide tip solutions. The longer blade operating life minimizes blade replacement and provides a cost-effective solution of cutting of material with low machinability.

How to Order

To order your Primalloy saw contact us:

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