Conforma Clad™ Improved Apex Design Twin-Screw Extrusion Barrels

Conforma Clad engineers, working with our customers, continually look for ways to improve the quality and effectiveness of our extrusion barrels. This bulletin outlines one such key design improvement now available across our line of twin-screw, co-rotating extrusion barrels.

Over 20 years ago, Conforma Clad and Coperion co-developed the Tri-Metallic Advantage™ wear solution that uses multiple cladding formulas to target the distinct properties required to protect extruder barrel bores and apexes. This solution uses a hard, wear-resistant cladding to protect the bore and a tough chip-resistant cladding for the apex.

How did we improve the design?

Improved Apex Design Advantages

1. **Seam location moved out of high-wear area of bore.**
   Seam moved out of high-wear area ensures fewer failures at this seam transition.

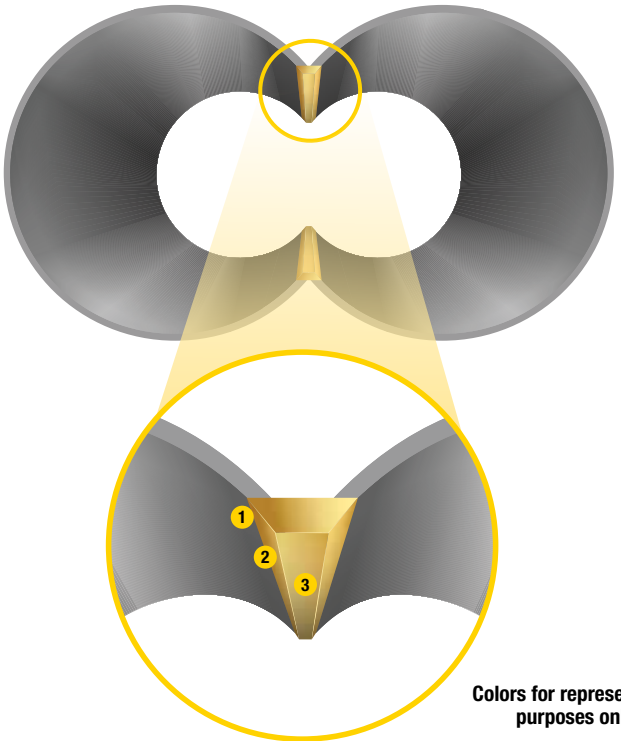
2. **No welding required at seam.**
   More robust design means no gaps to weld at seam, and therefore, better wear properties, longer life, and improved reliability.

3. **Blunt profile reduces stresses at apex.**
   Apex profile designed to give strength to this critical location on the barrel. Conforma Clad engineers designed our apex to avoid a “sharp” profile, which can cause chipping and apex failures.

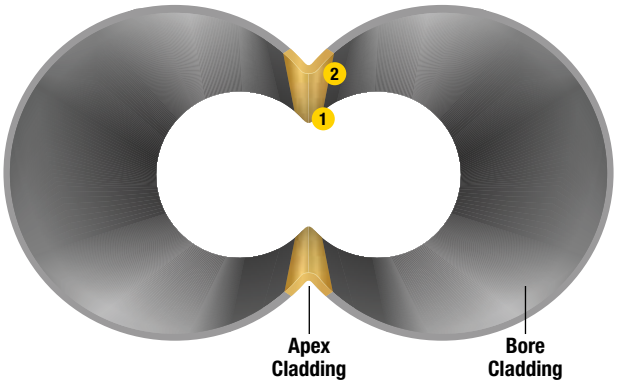
Previous Design

1. Apex cladding extended further into the high-wear area of bore.

2. More welding and repair operations necessary to close seam gaps.



Colors for representation purposes only.



KENNAMETAL™
CONFORMA CLAD

conformaclad.com

Conforma Clad™ Apex Design

Conforma Clad Barrels Offer

Kennametal Conforma Clad produces over 1,000 twin-screw extrusion barrels/liners each year, and is an industry leader in providing the highest quality, longest-lasting barrels for abrasive plastic compounding processes.

Improved Apex Design

Available on most Conforma Clad barrels and liners.

Reliable Operation

Metallurgically bonded, uniform cladding ensures no failures throughout the life of the barrel.

Unsurpassed Abrasive Wear Protection

Significant, proven advantage over competitive materials in highly abrasive compounding environments.

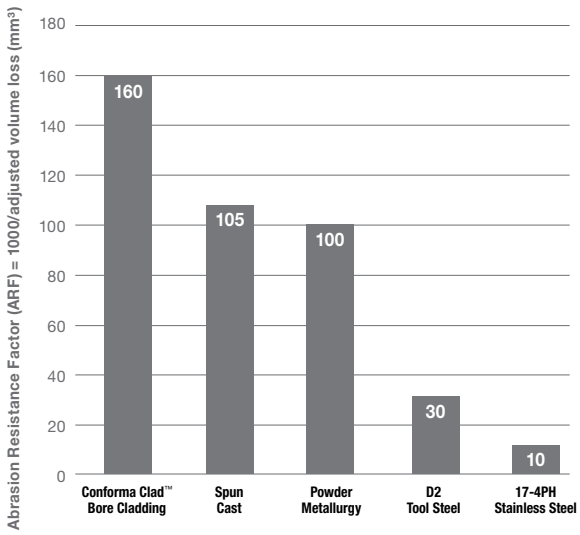
Improved Process Control

Reduced wear ensures tighter tolerances and improved production efficiencies.

Full Range of Barrels

Block, flanged, combi, and cylindrical style barrels available in a wide range of sizes.

Dry Sand Abrasion Test (ASTM G65)



Up To 1.6x Better
Abrasion Resistance vs. Competing Materials

Barrel Specifications

	Barrel Dimensions (mm)	
Manufacturer	**Bore Diameter**	**Barrel Length**
Coperion	30–177	93–720
Krauss Maffei Berstorff	43–140	160–650
Davis-Standard/Toshiba	32–152	105–490
JSW	specific sizes available	
Leistritz	specific sizes available	
Entek	specific sizes available	
Clextral	specific sizes available	
Buhler	specific sizes available	

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