



Beaded Strand System (BSS™) is a repeatable and controlled process for creating a homogenous, undifferentiated spherical bead at the end of a strand, cable, or wire rope. The bead of this system provides a secure attachment point without the need to incorporate external hardware - eliminating undesirable weight or friction in a system. With precision tooling, the size of this beaded end can be accurately controlled to meet high tolerance requirements for a wide array of applications.



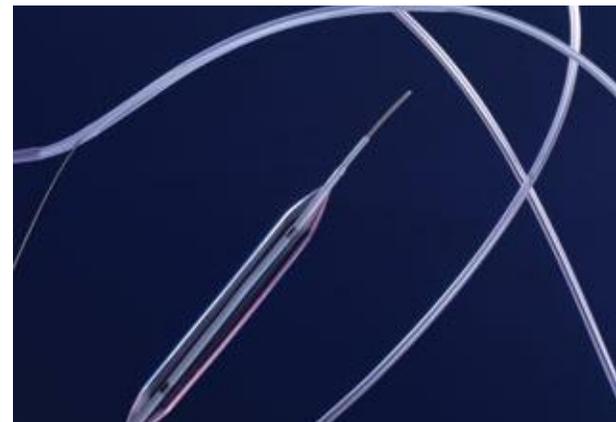
APPLICATION

Having a superior mechanical advantage, the bead can be received into a mating pocket and act as a push-pull wire or ball joint. The round feature can prevent tears and scratches on part surfaces that it may come in contact with during application or assembly. Common applications include:

- Robotic arms
- Angioplasty Guidewires
- Endoscopes
- Fluoroscopy
- Steerable Catheters
- Upper Limb Prosthetic

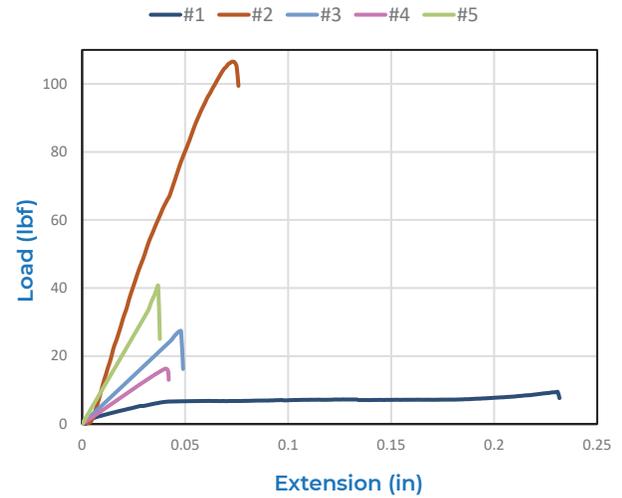
BENEFITS

- Streamline biocompatibility applications as the beaded end is formed from its source material.
- Reduce costs and lead time through simplifying product supply chain and minimal scrap rate.
- Bead diameters are easily modified since all processing occurs in house.
- Allow bead formation without machined secondary terminals.
- Metallurgical bond produces reliable tensile properties.



BSS™ SAMPLE DATA

| # | Material | Construction | Diameter (in) | Bead End Diameter (in) | Breaking Strength (lbf) |
|---|----------|--------------|---------------|------------------------|-------------------------|
| 1 | Nitinol | 1x7 | 0.012 | 0.020 | 9.4 |
| 2 | 304 SS | 1x7 | 0.030 | 0.045 | 106.6 |
| 3 | 304 SS | 1x7 | 0.018 | 0.020 | 27.3 |
| 4 | Tungsten | 8x19 | 0.018 | 0.036 | 16.2 |
| 5 | Tungsten | 7x37 | 0.027 | 0.043 | 40.6 |



ADDITIONAL FEATURES

- All processing performed in ISO class-7 clean room.
- Optional passivation per ASTM A967 and ultra-sonic cleaning.
- Packaged clean ready for use in your clean room facility.
- Process capability analysis available at request.
- Where applicable, secondary processing can be employed to increase tensile strength.

CONSTRAINTS

- Maximum bead diameter limited to approximately 2.5x base material diameter.
- Tensile strength reduction to approximately 40-60%, and up to 80% for certain process techniques, relative to breaking strength of cables.

Strand Products, Inc. is a world leader in the design and manufacture of innovative high tolerance mechanical wire and stranded cable assembly. Assemblies utilize stranded and single filar wire from $\varnothing.0004''$ to $\varnothing.375''$ in diameter. Materials include Nitinol, Stainless, Tungsten, Elgiloy, Inconel, Brass, and various polymers. Industries include medical, aerospace, automotive, and defense. In-house capabilities include design, testing, process validation, cleanroom assembly, crimping, swaging, laser & plasma welding, passivation, barcoding and packaging. Certifications held include AS9100 ISO9001:2015, QML-6117, FDA, and ITAR. To learn more, please visit www.strandproducts.com