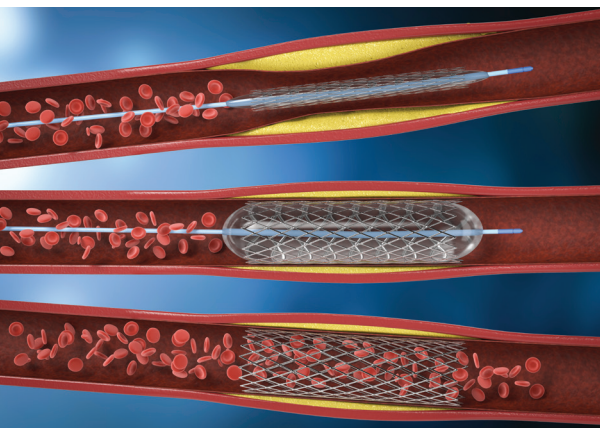


# Beaded Wire System



**Beaded Wire System (BWS™)** is a repeatable and controlled process for creating a homogenous, undifferentiated spherical bead at the end of a wire, rod, or tube. 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

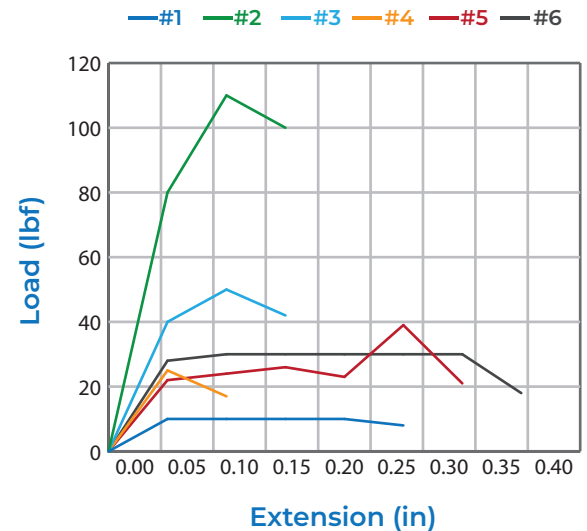
## BENEFITS

- 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.



## BWS™ SAMPLE DATA

#	Material	Wire Diameter (in)	Bead End Diameter (in)	Breaking Strength (lbf)
1	Super Elastic Nitinol Wir	0.010 OD	0.025	7.8
2	304 SS Wire	0.030 OD	0.050	106.6
3	Super Elastic Nitinol Wire	0.020 OD	0.035	37.3
4	Titanium 6Al-4V ELI Wire	0.156 OD	0.030	31.9
5	304 SS Hypotube	0.042 OD, 0.022 ID	0.060	21.4
6	304V SS Wire	0.0156 OD	0.025	47.3



## 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](http://www.strandproducts.com)