

Boom Pendants Characteristics

- *Fitted with end terminations, such as open or closed-type sockets for main pendants, and bridge sockets for intermediates and safety pendants*
- *Attachment of fittings with either zinc or resin*
- *Available with wire rope or galvanized structural strand*
- *Prestretched, measured, striped, and proofloaded upon request*
- *Provided with a relubrication tube — originally patented at this facility, the Lube Tube is a grease fitting inserted into the socket basket prior to attaching to provide a means of internally lubricating the wire rope or strand for the life of the pendant — on all boom pendants 2-5/8" diameter and larger*



Galvanized Structural Strand

- Arrangement of wires laid helically around a center wire to produce a symmetrical cross section
- Recommended for use where strength is needed, but bending and flexibility are not major requirements
- Offers a high strength-to-weight ratio, high modulus of elasticity, and a small diameter-per-unit strength
- Manufactured to meet ASTM Specification A586
- Available with Class A galvanized coating weight in diameters up to 5-1/2"

Wire Rope

- Recommended for use where bending ability is an important requirement
- Provides greater flexibility when compared with coarse strand constructions
- Manufactured in 6x19, 6x37, 6x61 and 6x91 Classifications
- May be either bright (uncoated) or with Class A galvanized coating through 7" diameter

For further information on wire rope, please refer to the Bethlehem Wire Rope® Standard Wire Ropes product bulletin or our Mining Products catalog..

Boom Pendants

STRAND DIAMETER		APPROX. WEIGHT (lb./ft.)	APPROX. METALLIC AREA (sq. in.)	NOMINAL STRENGTH (tons)	STRAND DIAMETER		APPROX. WEIGHT (lb./ft.)	APPROX. METALLIC AREA (sq. in.)	NOMINAL STRENGTH (tons)
inches	mm.				inches	mm.			
3/4	19.0	1.18	0.338	34.0	3	76.0	18.9	5.40	538
7/8	22.0	1.61	0.459	46.0	3-1/8	79.0	20.5	5.86	584
1	26.0	2.10	0.600	61.0	3-1/4	83.0	22.2	6.34	625
1-1/8	29.0	2.66	0.759	78.0	3-3/8	86.0	23.9	6.83	673
1-1/4	32.0	3.28	0.938	96.0	3-1/2	89.0	25.7	7.35	724
1-3/8	35.0	3.97	1.13	116	3-5/8	92.0	27.6	7.88	768
1-1/2	38.0	4.73	1.35	138	3-3/4	96.0	29.5	8.43	822
1-5/8	42.0	5.55	1.59	162	3-7/8	99.0	31.5	9.00	878
1-3/4	45.0	6.43	1.84	188	4	103.0	33.6	9.60	925
1-7/8	48.0	7.39	2.11	216	4-1/8	105.0	35.7	10.2	985
2	52.0	8.40	2.40	245	4-1/4	109.0	37.9	10.8	1,002
2-1/8	54.0	9.49	2.71	277	4-3/8	111.0	40.2	11.5	1,108
2-1/4	58.0	10.5	3.04	310	4-1/2	115.0	42.5	12.1	1,173
2-3/8	60.0	11.7	3.38	344	4-3/4	122.0	47.4	13.5	1,306
2-1/2	64.0	12.8	3.75	376	5	128.0	52.5	15.0	1,448
2-5/8	67.0	14.5	4.13	417	5-1/4	133.0	57.9	16.5	1,596
2-3/4	70.0	15.9	4.54	452	5-1/2	140.0	63.5	18.1	1,752
2-7/8	74.0	17.4	4.96	494					

For pendants using smaller diameter strand, please contact WWW's Customer Service Department.

Based on Class A coatings, the minimum moduli of elasticity of the structural strand are shown below. For heavier coatings, please consult WWW's Engineering Department.

1/2" to 2-3/16"	24,000,000 psi
2-5/8" to 4"	23,000,000 psi
4-1/8" & larger	22,000,000 psi

For technical information on wire rope, please refer to the Bethlehem Wire Rope® Standard Wire Ropes product bulletin or our Mining Products catalog. For more information on Bethlehem Wire Rope® Mining Boom Pendants and related end terminations, please refer to our Mining Products catalog.

Boom Pendant Options

The following options are available with all Bethlehem Wire Rope® Boom Pendants.

Performance Options

Parallel Contact Core — For many years, galvanized structural strand for boom pendants has been manufactured using a cross laid design, meaning each layer of wires is laid in the opposite direction of the preceding layer. Ultimately, this design creates notching, and eventual wire breaks, at the contact points from the extreme operating pressures. WWW designed the parallel contact core (PCC) to dissipate the very high internal pressures along the entire length of the wire. This new design greatly increases the area of wire to wire contact from preceding layers in the core region, providing greater wire to wire support and therefore decreasing the internal notching in the core of the strand where the pressures are the greatest.

Poly-Bloc™ — Poly-Bloc is an internal lubricant and blocking compound which is melted and pumped around each wire and into the cable during manufacturing. Poly-Bloc seals the interior of the cable, preventing the intrusion and entrapment of moisture. The use of Poly-Bloc impedes corrosion, rusting and general deterioration.

Vibration Damping System — Originally patented at this facility, WWW's vibration damping system consists of a split-flanged clamp secured to the rope or strand and bolted to a flanged socket through an elastomeric gasket. A lubricant reservoir is provided around the cable within the gasket. This system is designed to reduce vibration and fatigue in the wires adjacent to the end fitting, resulting in longer operating life.

Attachment Options

ASAC — Sockets may be attached using the very stringent Accurate Socket Alignment and Concentricity (ASAC) method. The ASAC method ensures that the axis of the strand as it enters the socket basket is parallel to the centerline of the socket basket. This procedure is recommended for boom pendants used as main pendants on walking draglines. Sockets are inspected for dimensional limitations and machined on the base (or nose) and on the outside of the socket basket at the base. Sockets are attached to the strand using specially-machined fixtures to ensure the desired accuracy.

Nondestructive Test Options

The following nondestructive test methods are available for sockets provided to WWW by the customer for attachment: magnetic particle; dye penetrant; ultrasonic; x-ray. Special customer and OEM requirements may be fulfilled upon request. Please contact WWW's Customer Service Department with your needs and requirements. It should be noted that WWW does not assume responsibility for the integrity of customer sockets, only the integrity of the attachment to the cable.



Williamsport Wirerope Works, Inc.
manufacturer of Bethlehem Wire Rope®

100 Maynard Street Post Office Box 3188
Williamsport Pennsylvania 17701 USA
telephone: 570-326-5146 facsimile: 570-327-4274
<http://www.wwwrope.com>



Wire rope products will break if abused, misused or overused. Consult industry recommendations and OSHA Standards before using. Williamsport Wirerope Works, Inc. warrants all Bethlehem Wire Rope® and Strand products. However, any warranty, expressed or implied as to quality, performance or fitness for use of wire rope products is always premised on the condition that the published breaking strengths apply only to new, unused rope, that the mechanical equipment on which such products are used is properly designed and maintained, that such products are properly stored, handled, used and maintained, and properly inspected on a regular basis during the period of use. Manufacturer shall not be liable for consequential or incidental damages or secondary charges including but not limited to personal injury, labor costs, a loss of profits resulting from the use of said products or from said products being incorporated in or becoming a component of any product. Williamsport Wirerope Works, Inc. © 2000

