BAND-IT Certifications and Approvals

Det Norske Veritas (DNV) DNV Classification is a service which comprises the development of independent technical standards for vessels, the DNV Rules for Classification of Ships, and the verification of compliance with the rules throughout the vessel's life. The scope of Classification includes and requires that specified materials, components and systems intended for the vessel are certified in accordance with the DNV rules.

A manufacturer is defined as a company that:

— Manufactures the material/product totally, or

— Performs a part of the production that determines the quality of the material/product, or

— Does the final assembly of the product.

A manufacturer must take and acknowledge the responsibility for the delivered material/product.

American Bureau of Shipping (ABS) A classification sign and construction of new vessels and the integrity of existing vessels and marine structures.

Lloyd's Register Group A maritime classification society and independent risk management organization providing risk assessment and mitigation services and management systems certification. Historically, as Lloyd's Register of Shipping, it was a specifically maritime organization.

Russian Maritime Register of Shipping (RS) The activities of Russian Maritime Register of Shipping (RS) are aimed at providing the safety of navigation, safety of life at sea, security of ships, safe carriage of cargo, environmental safety of ships, prevention of pollution from ships, performance of authorizations issued by Administrations and customers.

RS develops and continually improves the RS rules and guidelines in compliance with requirements of the international standards to ensure the safety at sea and pollution prevention.

The RS task is both to maintain its own quality management system at the highest possible level and to promote also implementation of high technical standards in design of ships, shipbuilding and shipping industry using its unique experience in ensuring maritime safety.

Germanischer Lloyd (GL) A classification society based in the city of Hamburg, Germany. As a technical supervisory organization Germanischer Lloyd conducts safety surveys on more than 7,000 ships with over 79 Mio GT. Its technical and engineering services also include the mitigation of risks and assurance of technical compliance for oil, gas and industrial installations as well as wind energy parks.

Underwriters Laboratories (UL) An independent product safety certification organization that develops standards and test procedures for products, materials, components, assemblies, tools and equipment, chiefly dealing with product safety.

Aramco 9COM BAND-IT® is registered as an Aramco 9COM manufacturer.

British Standards Institution (BSI) is the business standards company that helps organizations all over the world make excellence a habit. We have many varied partners. These include international standards bodies, such as ISO, external consultants who help our clients and professional affiliations.

ISO TS 16949 ISO/TS 16949 is designed to address quality management in the automotive supply chain. It is based on the eight quality management principles: customer focus, leadership, involvement of people, process approach, system approach to management, continual improvement, fact-based decision making, and mutually beneficial supplier relationships. In addition, ISO/TS 16949 focuses on customer specific requirements.

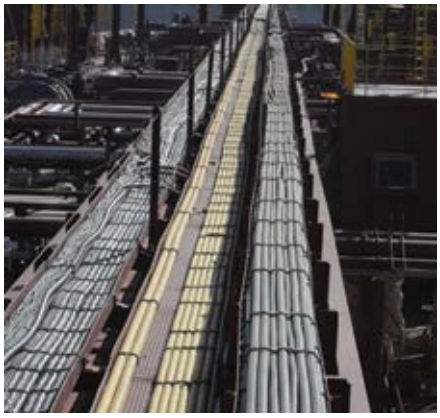
ISO 14001 The ISO 14000 environmental management standards exist to help organizations (a) minimize how their operations (processes, etc.) negatively affect the environment (i.e. cause adverse changes to air, water, or land); (b) comply with applicable laws, regulations, and other environmentally oriented requirements, and (c) continually improve in the above.

ISO 9001 The ISO 9000 family of standards relate to quality management systems and are designed to help organizations ensure they meet the needs of customers and other stakeholders. The standards are published by ISO, the International Organization for Standardization and available through National standards bodies. ISO 9000 deals with the fundamentals of quality management systems, including the eight management principles on which the family of standards is based. ISO 9001 deals with the requirements that organizations wishing to meet the standard have to fulfill.

CE marking is a mandatory conformity mark for products placed on the market in the European Economic Area (EEA). With the CE marking on a product the manufacturer ensures that the product conforms with the essential requirements of the applicable EC directives. The letters "CE" stand for "Conformité Européenne" ("European Conformity").

United States Coast Guard type approval is the primary process for equipment and materials to receive Coast Guard approval. For equipment or materials to receive Type Approval, they must be demonstrated to comply with the relevant requirements in the regulations, successfully complete the specified tests, and be enrolled in a quality control or follow up program as required.

GOST-R approval. GOST (Russian: ROCT) refers to a set of technical standards maintained by the Euro-Asian Council for Standardization, Metrology and Certification (EASC), a regional standards organization operating under the auspices of the Commonwealth of Independent States (CIS)



Definitions

Corrosion Resistance – The ability of a material to withstand degradation in specific environments.

Clamping Force (Retained Force) – The amount of force applied to an object by an installed clamp or tie. The clamping force maintains the assembly integrity and hardware placement.

Ultimate Strength – The maximum tensile or clamping force that a band clamp or tie will withstand prior to breaking.

Yield Strength – The point at which the material begins to stretch as a result of stress being applied. Loading beyond this point will result in deformation.

Loop Tensile Strength – The amount of force, applied radially, an installed clamp/tie will withstand prior to failure.

Epoxy – A powder coating material with a good level of corrosion and chemical resistance.

Nylon 11 – Non-toxic polymer cable tie coating resistant to stress,cracking, abrasion, impact, high corrosion resistance, excellent chemical resistance to various acids and alkine materials (chemical resistance information can be provided). When subjected to fire, this coating is self extinguishing, produces low amounts of smoke, and is halogen free.

PPA 571 – (Performance Polymer Alloy) A non-toxic polymer coating resistant to stress cracking, abrasion, impact, high corrosion resistance, excellent chemical resistance to various acids and alkaline materials (chemical resistance information can be provided). When subjected to fire, this coating is free from halogen, phthalates, isocyanates and heavy metals and produces low amounts of smoke.

Application Tool – Tools to install band clamps and tie products consistently.

Stainless Steel grades:

Type 201 Stainless Steel (EN 1.4372)
Type 201 is an austenitic chromium-nickel-manganese steel, with excellent tensile properties. If offers good resistance to oxidation and many mild to moderate corrosive agents. Type 201 is used where greatest strength is required. It is the BAND-IT material most commonly used.

Type 304 Stainless Steel (EN 1.4301)
Type 304 is an all purpose austenitic, low carbon 18-8 chromium-nickel stainless steel. It has good corrosion resistance and weldability. Type 304 is the most widely used stainless steel. It is found in chemical and food processing equipment, hospital and paper mill equipment, heat exchangers, etc.

Type 316 Stainless Steel (EN 1.4401)
Type 316 is an austenitic chromium-nickel stainless and heat resisting steel with superior corrosion resistance. It is extensively used in marine atmospheres and environments where it is subjected to various chemicals, salts, acids, and high temperatures. Type 316 has superior creep strengths at elevated temperatures.

Austenitic Stainless Steel
Austenitic stainless steels are chromium-nickel-iron (series 300) or chromium-nickel-manganese-iron (series 200) alloys. Austenitic stainless steels are non-magnetic in the annealed condition but, depending on the composition (mainly the nickel and manganese content), they become slightly magnetic when cold worked. Austenitic stainless steel cannot be hardened by heat treating but only by cold working. They are the most popular grades of stainless steel due to their excellent formability and corrosion resistance.

VALUSTRAP™ – Any Austenitic Stainless Steel Band

- A non-magnetic 200-300 AA grade stainless steel strapping
- Used for securing light weight signs, pipe insulation, cable bundling, and a variety of other lightweight fastening applications
- Good corrosion resistance

C001 / C075 / C400

See pages **26-29** for full details on **TOOLS** and their specifications.

Valustrap™

Austenitic Stainless Steel • Thickness 0.015" (0.38mm)

PART NUMBER	100Ft. Roll (30.5M) WIDTH IN.	WIDTH MM	WEIGHT LBS	WEIGHT KGS	PART NUMBER	300Ft. Roll (91.5M) WEIGHT LBS	WEIGHT KGS
C133	3/8	9.53	2.2	1.0	**C123**	5.7	2.6
C134	1/2	12.70	2.9	1.3	**C124**	7.7	3.5
C135	5/8	15.88	3.6	1.7	**C125**	9.7	4.4
C136	3/4	19.05	4.4	2.0	**C126**	11.7	5.3

Available in mill coil lengths. All sizes in standard cardboard packaging

Valustrap™ Plus 100Ft. Roll (30.5M)

Austenitic Stainless Steel • Thickness 0.020"(0.51mm)

PART NUMBER	WIDTH IN.	WIDTH MM	WEIGHT LBS	WEIGHT KGS
C191	3/8	9.53	2.9	1.3
C181	1/2	12.70	3.8	1.7
C171	5/8	15.88	5.6	2.5
C161	3/4	19.05	5.7	2.6

Available in mill coil lengths

304 Stainless Steel Band 200Ft. Roll (61M)

304 Stainless Steel • Thickness 0.015"(0.38mm)

PART NUMBER	WIDTH IN.	WIDTH MM	WEIGHT LBS	WEIGHT KGS
C903	3/8	9.53	4.4	2.0
C904	1/2	12.70	5.8	2.6
C905	5/8	15.88	7.3	3.2
C906	3/4	19.05	8.8	3.9

Available in mill coil lengths

Valustrap™

Valuclips™ Pack Qty – 100 • Austenitic Stainless Steel

PART NUMBER	WIDTH IN.	WIDTH MM	WEIGHT LBS	WEIGHT KGS
C153	3/8	9.53	0.6	0.3
C154	1/2	12.70	1.1	0.5
C155	5/8	15.88	1.2	0.5
C156	3/4	19.05	2.1	0.9

Valuclip™

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