

AAMSTRAND ROPE GLOSSARY

abaca –a species of banana plant grown almost exclusively in the Philippines; the fiber of which is processed to become manila rope. The abaca is also grown in Central America, Sumatra and Borneo.

abrasion resistance –capacity of rope material to withstand wear due to friction, rubbing or scraping.

acceleration stress – additional stress placed on rope due to increasing the velocity of load.

Alaskan King Crab Line – a specialty rope of various materials used in King Crab fishing. Characterized by its firmness of lay.

Anchor line –rope with a thimble spliced into one end for attaching an anchor.

awning cord – small diameter cord used for many utility purposes; most commonly a cotton braid with stretch resistant fiber core.

Backstay –a stay to keep a mast from leaning forward. Can either be fixed or running. Running backstays are rigged on both sides of the boat and are set up or slacked off depending on the point of sailing.

Baler twine – single ply twine, usually of sisal or polypropylene, used by farmers for tying bales of hay.

Bight –a loop made in any part of a rope.

Binder twine – a twine used in binding and for other utility purposes; most commonly of natural fibers- jute, sisal, etc.

Bitt(s) –a post or pair of posts with or without a crossbar (norman) for securing heavy lines; usually in the bow of a boat.

Bitter end – in tying knots or splicing, refers to the end opposite the end in use. Used to give mechanical advantage when lifting or pulling heavy weights.

Blend –a combination rope or mix of different synthetic fibers to form one rope. An example is Aamstrand's Polyxtra.

Block –a pulley; there are many kinds-single, double, snatch, cheek, etc. The rope runs over the sheave set between the two shells (cheeks) of the block. Also a die of steel in the form of a tube of a desired diameter into which yarns are fed to be formed into a strand of rope.

Blown filament – monofilament poly-propylene into which is blown a special gas during extrusion. This produces a lighter, less expensive and less strong rope, size for size, than standard polypropylene; also called foamed filament.

Bollard –a round heavy post for securing lines; sometimes on a boat, but usually on a Pier.

Bonding – a liquid coating that increases abrasion resistance and prevents water absorption.

Break-in –period of use in which the filaments of a rope settle in together; thus, the rope lengthens somewhat.

Breaking strength – the measured load required to break a rope in tension; also called tensile strength.

Cable laid rope – consists of three small ropes twisted together to form a single rope.

Capstan –a rotating cylinder used in winding a rope or cable; also used in spinning and twisting yarn, twine or rope.

Carrier – part of a cordage braiding machine that carries the group of yarns or the single yarn like a single strand through the braid as it is made. May also refer to that yarn or group of yarns.

Catline – a heavy line used for general hoisting in oil well drilling; also called cathead line.

Chafing gear – any device - leather, rope, plastic, etc.; used to prevent lines, sails, decks or spars from wear.

Chalk and mason line – small cords of various fibers, braided or twisted, used in construction for marking straight lines; the cord must have a rough texture to hold chalk.

Co-efficient of friction –gripping ability important for rope use on winches and in situations where slipperiness can be dangerous or cause problems. Gripping depends upon the friction or texture of the rope itself, its elasticity, creep (or taffy effect, as in monofilament polypro), the area of contact and the ratio of rope size to bitt size.

Combo or combination cordage –a blend of two or more rope materials into one cord. For example, Aamstrand's Polyxtra combines the advantages of an outer sleeve of polyester with a light weight core of polypropylene.

Composite rope –a combination rope of polypropylene/polyester or other combinations of fiber types. An example is AAMSTRAND's Polyxtra.

Cordage – string, line, rope, twisted or braided, generally refers to small sizes one inch diameter and under.

Cork line –a floating line, braided or twisted, made of regular or foamed polypropylene. May have nylon or polyester protective covering for greater abrasion resistance; also called float line.

Crab lay –an exceptionally tight twist given to rope used in the crab fishing industry. The hard lay is necessary to prevent hockling.

Crab trap line –a small diameter cord used for lifting crab traps and other. May be twisted or braided. Cotton is the most common though various fibers may be used.

Cracker – manila rope spliced to the end of a wire rope drilling line.

Creep –the "taffy effect" - a slow flow of a synthetic material such as polypropylene under high temperature or great pressure.

Crimp – to bend, kink, curl or wave a fiber to give it more loft.

Crown splice – braiding or splicing the end of a rope into itself to prevent fraying and unraveling. An alternative to whipping.

Curtain cord – small diameter cord used for drapery, traverse cords, draw cords, etc. Most commonly made of braided cotton with various fiber core.

Dacron – a Dupont de Nemours Co. trademark for polyester.

Diamond braid – cordage construction with 8, 12 or 16

strands of fibers braided under and over each other in a circular direction. The center of the rope may be hollow, such as in hollow braid, allowing for easy splicing; or it may have a center core of parallel fibers. It is generally stronger than solid braid, but not as strong as twisted or braid on braid cordage.

Dielectric – a non-conductor or poor conductor of electricity. Polypropylene rope has excellent dielectric properties.

Double braid – cordage construction with a jacket braided over a braided rope core two ropes in one. A very strong and flexible rope that doesn't hockle, kink or rotate under a load. It is spliceable; also called braid on braid, double spliceable braid and yacht braid.

Downhaul –In sailing, tackle fitted to the boom gooseneck to keep a proper strain on the forward edge of the sail.

Drapery cord – braided cord of small diameter made usually of cotton with various types of fiber core, such as fiberglass, polyester, etc. Used as draw cords, traverse cords and curtain cords.

Dynamic loading –a sudden or rapid force applied to a rope caused by stopping, jerking, swinging, etc. In some cases, the force may be two, three, or even more times the normal load involved. For example, picking up a tow on a slack line or stopping a falling object, can cause a dynamic loading of a rope. Working loads do not apply under such conditions.

Economix – AAMSTRAND's brand name for an economy

priced rope made from a mixture of synthetic fibers. This rope carries no guarantee or warranty, even though the same care is taken in its manufacture, as in the manufacture of our other twisted rope. It is used for leaving line and other uses where an economical line is needed.

Eight strand – a plaited (or braided) construction of eight strands; usually found in large sizes for mooring, shipping and towing uses. Exhibits no torque in heavy towing. Made of various fibers.

Extrude –to push a melted resin through small tube shaped dies, thus forming a single fiber, as in mono-filament or multifilament polypropylene. Split film polypropylene is extruded into sheets of plastic and split into ribbon-like fibers that are twisted into rope.

Eyesplice –a fixed loop formed in the end of a line by splicing the end back into its standing part.

Fathom –a unit of measurement. One fathom is approximately six feet.

Fiber – a natural or synthetic filament capable of being spun into yarn.

Fibrillated –an extruded filament used in making rope. When a single filament is unlaidd, it resembles a net of loosely bonded fibers.

Fid –a tapering pin used to open the strands of a rope prior to splicing. It is sometimes hollow.

Filament – a fine or thinly spun thread; a fiber.

Float line – a braided or twisted rope made primarily of foamed or regular polypropylene so that it

floats; also called cork line or topline.

Foamed – a monofilament polypropylene into which gas is blown during extrusion. This produces a lighter weight, less expensive, less strong rope size for size than standard polypropylene.

Former – rope making equipment which combines and twists several yarns into a single strand.

Four stage construction – a manufacturing process for making three strand twisted rope. The four stages are: (1) twisting fibers into one ply yarn; (2) twisting these yarns into three ply yarn; (3) forming the strand; and (4) twisting three strands together into finished rope.

Genoa jib – an oversized jib which overlaps the mainsail and is controlled outside the rigging and is used chiefly in races to give a boat more speed.

Gooseneck – in sailing, a fitting which holds the boom to the mast.

Guy ropes – lines used for steadying, guiding or holding something.

Halyard – a line used to hoist or lower a sail or a flag.

Hand – the feel of rope to the touch, its roughness, slipperiness. etc.

Hand line – a small diameter rope managed chiefly by direct contact with the hands; used in fishing and in the utilities industries.

Hank – a looped bundle of cordage.

Hawse – a rope used in mooring or in towing vessels.

Heading twine – a small diameter twine usually of braided nylon used by commercial fishermen for tying pot heads.

Hemp – the fibers of a tall plant, the cannabis sativa, grown in Asia; also called "marijuana" or "Indian hemp". It may also refer to a fiber similar to true hemp such as manila

Henequin – the Agave fourcroydes. a plant native or Yucatan, Mexico, the fibers of which are used in making sisal cordage.

Hockle – a back turn; a twist against the lay that cannot be corrected. It can lessen the tensile strength by as much as 50%. Braided or plaited rope cannot hockle.

Hollow braid – an easily spliced cord of a diamond braid construction; most common in nylon or polypropylene - for example, water ski tow rope.

Jenny – a rope making machine that twists several single ply yarn or single fibers into one larger yarn.

Jib – triangular sail set in forepart of vessel.

Jute – a natural fiber obtained from either of two Asian plants, corchorus capsulans or corchorus olitorius; used in sacking and cordage.

Kink – a sharp bend or twist in a rope that permanently distorts the strands.

Laid up – twisted.

Lariat – a specially constructed rope with a running noose for catching livestock; a lasso. Also, a rope used for picketing grazing horses or mules.

Lay – to piece together strands to be twisted into rope.

Lead line – sinking line used in fishing for lower line holding down nets or traps. May have a lead

filament or core that would make the rope sink: also called bottom line.

Leaving line – a barge mooring line used primarily to tie up unattended barges. A random mix rope is generally used for this purpose such as AAMSTRAND'S Economix.

Left-handed twist – an "S" twist or a twist that would be unlaidd in a counterclockwise direction.

Life line – an anchored line used as a support to someone who may fall or drown; a line shot to a ship in distress either to connect it with the shore or for hauling aboard other life-saving devices; lines rigged to keep the crew aboard in bad weather.

Lift – the line rigged from the mast which holds the outboard end of the bosom or spinnaker pole in a desired horizontal position.

Line – a cable, rope, string, cord, or wire.

Linear density – in rope specifications, means weight per given unit of length; for example, pounds per 100 feet.

Locklines – a line led from the bow and stern of a tow to the lock wall.

Lofted – a cordage material is lofted if it is made to yield more feet and diameter per pound by crimping the fibers and/or loosening the twist or weave to give more bulk per unit of weight.

Long splice – a method for joining end to end a three stranded rope without increasing the diameter of the rope. Not as strong as a short splice, but essential in splicing rope that must be used in a pulley where rope diameter cannot be changed. See splicing instructions.

Luff –the forward edge of a fore-and-aft sail.

Marlinspike – a pointed spike used to separate strands of rope in splicing.

Mainsheet –a rope by which the mainsail is trimmed and secured.

Mason line –a utility cord used for alignment in construction and other uses.

Manila –a fiber of the abaca plant used in making rope; also called manila hemp.

Maypole braid –a non spliceable braid constructed with 8, 12, or 16 strands of fibers braided around a center core of parallel fibers. The strands form a herringbone pattern on the rope. May also refer to diamond braid.

Monofilament –polypropylene or polyethylene extruded in relatively large round fibers of large denier as compared with the fine fibers of multifilament; usually extruded by the rope manufacturer.

Mooring line – a rope or cable used to secure or make fast vessel or aircraft.

Multifilament – fine diameter continuous fibers of small denier. Polypropylene, for example, may be extruded as a monofilament or a multifilament. Nylon, used in cordage, is multifilament usually.

Natural fiber –any organic fiber such as cotton, jute, manila, sisal, etc.

Nylon–any of a family of high strength, resilient synthetic materials, the long chain molecule of which contains the recurring amide group CONH: a strong synthetic rope fiber known for its ability to absorb sudden shock, its abrasion resistance, and its

chemical and marine organism resistance.

Olefin–any of a class unsaturated hydrocarbons such as ethylene's having the general formula C_nH_{2n} . Polypropylene and polyethylene are both made of olefin fibers.

Outhaul – a tackle or small wire reel winch used to pull the lower rear corner of a sail aft along a boom.

Pay out, to –to let go or slack off a line–It infers that the rate is controlled.

Plaited –braided; generally refers to 8 strand large diameter rope in either a square or round braided construction.

Ply –one of the strands twisted together to make yarn, rope or thread or twine; used in combination to indicate a specified number of strands (example: two ply).

Polished (glazed) –a cotton cord that has been run through a gum and pigment polish to give it a gloss.

Polyester –a synthetic fiber used for its strength and resistance to ultraviolet deterioration. It does not have the stretch and elasticity of nylon and, as a result, will often last longer.

Polyethylene – a floating polyolefin fiber similar to polypropylene, but a little heavier and not quite as strong.

Polyfoam – a monofilament polypropylene into which gas is blown during extrusion; thus, producing a lighter weight, less expensive, less strong rope or twine, size for size, than standard polypropylene. See blown filament and foamed.

Polyolefin – a synthetic fiber group in which the fiber forming substance is any long-chain synthetic polymer composed of least 85% by weight of ethylene, propylene, or other olefin units. Polyethylene and polypropylene represent this group.

polypro –short for polypropylene.

Polypropylene – a light weight, strong rope with many uses. It is waterproof, rot and resistance, and floats. For most rope requirements, it is the most economical rope to buy.

Polyxtra –AAMSTRAND's brand name for a combination rope. It has a 100% polypropylene core with a 100% polyester sleeve. Polyxtra I has one polyester sleeve and Polyxtra II has two sleeves. Upon special request, the sleeves may be made of dacron or spun dacron.

Pool rope –a floating three strand twisted rope made of polypropylene, used as boundary rope in swimming pools; usually identified by one dark blue and two white strands.

Pot warp –specially constructed 3 strand twisted black polypropylene rope used primarily for lobster fishing, but may be used as crab line, net line and for various other purposes. Black color resists sunlight deterioration.

Random mix – economy grade rope made from a mixture of synthetic yarns polypropylene, polyester, and nylon. It is also called random polypro, since polypropylene usually forms the bulk of the fiber. Economix is AAMSTRAND's brand name for random mix.

Ready – a smooth round strand made of several yarns just prior to being twisted or plaited into 3, 4 or 8 strand rope.

Right hand twist – a Z-twist or a twist that would be unlaidd in a clockwise direction.

Ring twister – a spinning machine used in yarn manufacture.

Rope – cordage; generally refers to cordage over 1" circumference (about the size of a pencil). It may be twisted or braided, of natural or synthetic fibers or wire.

Running rigging – all lines and gear used to trim and set sails.

S-twist – a left handed twist; a twist that would be unlaidd by turning the yarn or rope in a counterclockwise direction.

Safety factor – a number that the tensile strength is divided by in order to determine the safe working load (for new rope in good condition with proper splices).

Sash cord – a cord used within the frame of certain windows that works on a pulley to help raise and lower the window easily within its frame. It is generally a solid braid cotton with various fiber cores for low stretch; a sash cord may also be used for other utility purposes.

Seine twine – a small diameter twine either braided or twisted most commonly of nylon; used in making fish nets, net repairs, fishing line, chalk line, duck decoy, anchor lines and many other utility uses.

Shackle – a small U-shaped fitting often used to join the thimble in an eyesplice to a fitting. The open end is connected by a screw pin.

(A snap shackle has a spring loaded pin).

Sheave – a grooved wheel or roller in a block or pulley over which the rope passes.

Short splice – method for joining rope, end to end, when maximum strength is desired when an increase in diameter is acceptable and/or when only a small amount of rope can be spared for making a splice. See splicing instructions.

Shrink packaging – at AAMSTRAND, large coils and reels of rope are covered with plastic sheets, then passed through a shrink tunnel. The heat in the tunnel causes the plastic to contact - conform to the contour of the rope. This keeps the rope tightly coiled and clean in transit and in storage.

Shock cord – an elastic cord used for tiedown purposes, snubbing gear, etc. made of elastic rubber core with a braided synthetic fiber jacket.

Sisa – the fiber of the agave sisalana used for making cordage and rope. May also refer to the Henequin or Agave Fourcroydes, a plant native to Yucatan, Mexico.

Ski tow rope (water) – usually a small diameter hollow braid polypropylene rope used for pulling water skiers behind motor boats. (snow) – usually a three strand twisted rope of various synthetic fibers attached to a motor; this rope pulls skiers uphill.

Sliver – a continuous strand of parallel overlapping natural fibers (manila, cotton, sisal, jute. etc.) ready for twisting.

Solid braid – a construction of 9, 12 or 18 strands of fiber, lock-stitched together. It has a smooth, round, firm contour which holds

its shape well under pressure and load. It is excellent in pulleys and winches and wherever a firm round rope is needed. It is not as strong as other braids nor is it spliceable.

Spar – in general, any mast, yard, pole or boom.

Spinnaker – a light, very large three cornered sail set flying forward of all fore stays. Used on racing yachts when running before the wind.

Splice – to join ropes by interweaving strands or braids.

Spun – a fiber that has been texturized by spinning before it is twisted into yarn, giving it a woolly texture, similar to cotton. It is common in nylon, polyester and Dacron (T.M.)

Standing rigging – all lines and gear used to support the masts.

Starter cord – a strong abrasion resistant braided cord usually of nylon; used for hand-wound gasoline engine starters and other utility purposes.

Strand – yarns twisted together form a strand or ready. Strands twisted or plaited together form a rope.

Stringing line – a line used for extending a wire or cable.

Synthetic fiber – any non organic fiber used in rope or cordage manufacture.

Tackle – also called block and tackle. A means of gaining leverage by a line run through one or more blocks; usually two or more. The number of lines which support the load determine the mechanical advantage.

Tarred – a coating of tar applied to various fibers, ropes, manila, nylon, etc. to limit absorbency.

Tensile strength –the resistance of rope to a force tending to break it: also called breaking strength, or the force that must be applied to break a rope.

Texturize – to process fibers in such a way as to add texture and/or loft to the fiber (crimping, spinning, etc.)

Thimble – metal ring or eyelet around which a line is spliced. The line fits into the concave outside; the convex inside bears the strain and wear.

Timberheads –the end of a rib in a ship's frame that projects above the deck and is used as a bollard.

Topline –(also called float line or cork line) - a floating line on the top of a net.

Torque –the tendency of a rope to rotate under a load.

Tow – to pull: also, one or more barges or other floating vessels in charge of a self-propelled vessel which is transporting it or them.

Trot line – in fishing, a comparatively short set line used near shore or along streams.

Truck rope – three strand polypropylene rope made to meet the standards established by the State of California, for holding down cargo or canvas in heavy truck transporting.

U V resistance –ability of a rope fiber to withstanding decay due to the damaging effect of the ultraviolet rays of the sun.

Venetian blind cord –a braided cord generally of nylon or cotton with various fiber core.

water ski tow rope – small diameter hollow braided polypropylene used for pulling a

water skier behind a motorized boat.

webbing – a sturdy fabric woven in narrow widths for use where strength is required as for seat belts, head bands, etc.

welt cord –a tape or covered cord sewn into a seam as reinforcement or trimming.

Whipping –cord or thread used to lash or bind the end of a rope to prevent unlaying.

Working load – (or working strength) is the weight in pounds that is recommended for safe working conditions. It is applied to new rope in good condition with appropriate splices and only under normal service conditions. Where dynamic loading may occur, the recommended working load should be adjusted accordingly. (See Rope Specifications page 18).

Yacht braid – a braid on braid, double spliceable cord used as running rigging in sailing; usually polyester over polyester.

Yarn – long fibers or filaments twisted together

Z-twist –right handed twist; a twist that would be unlaied by turning the yarn or rope in a clockwise direction.