DYNEX 75

.. for marine geological seismic surveys

The **DYNEX 75** rope is made of *Dyneema* SK75 fibre. The **DYNEX** towing ropes with comparable size of *Dyneema* ropes are becoming more and more accepted in all kinds of towing.

• **Haired Fairings Principles**. One of the major considerations when designing marine tow cable systems is the effect of fluid dynamics on the system, i.e. hydrodynamic drag and cable strumming.
• With conventional round section cable moving through water, a low pressure area is created behind the cable as it moves and water rushes around the cable to fill this area. This creates vortices in the wake of the cable. As the velocity of the cable increases, turbulence caused by these vortices produces an unnecessarily high drag coefficient and cable instability or strumming. The effect of strumming on a cable can be to greatly increase its drag coefficient (as the effective surface area increases).
• **"Kiting"** can also occur when the cable begins to hydroplane through the water in a skip pattern as a kite would in high winds.
• **Fairing** of a cable will help address this effects by producing a controlled shedding of the vortices and reducing turbulence. The haired fairings trails behind the cable like a tail of a kite and can freely adjust to the direction of cable movement and water flow. By reducing the turbulence caused by uncontrolled vortice shedding the fairings reduce strumming and also reduce drag. The cable presents a more stable condition in the water flow.

Hampidjan Ltd. has developed a haired fairing variant with **DYNEX 75** as ground material and overbraided with closely knit polyester fiber braid with tails (fronds) of same material pulled out at regular intervals along the axis of the cable. Both frond density and length are variable to suit cable size and service requirements. Production is fully automated with individual fronds being fully locked into the braid package.

DYNEX 75 treated with *Duracoat* for increased abrasion and chafe resistance provides ultimate long term performance in any application.

Hampidjan Ltd. is a major supplier to PGS, the world known geological exploration company, for **DYNEX** towing ropes and cables. PGS has consistently reset the industry standards in performance capability, and not just with the Ramform fleet. The field performance of the Ramform is outstanding. Equipped to tow as many as 12 to 20 streamers, the PGS Ramforms are the only vessels in the world today to tow eight full-length streamers routinely.

DYNEX Rope Construction

Hampidjan's main focus is on the 12-strand braided ropes which have proven very popular for their roundness and smooth surface. Termination is easy through splicing where up to 90% of linear strength is retained. Three basic types are being offered:

- **DYNEX 75 12-strand braided rope or**
- **DYNEX 75 with braided cover**
- **DYNEX 75 Cable Rope**

Dyneema SK75 Fibre

Density	0.97 g/cm^3
Tenacity	3.5 N/tex
Modulus	120 N/tex
Elongation	3.7%
Melting point	144-152°C
Resistance to chemicals	Excellent
UV resistance	Good
Flexibility	Good

Rope Dimensions

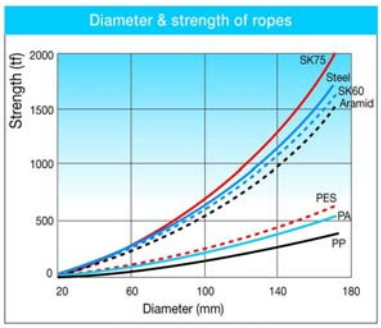
A typical towing rope has a breaking strength of 250–400 tons. For DYNEX this means diameters in the range of 60 to 78 mm. Weights and breaking strengths of DYNEX ropes and wires are shown in the table.

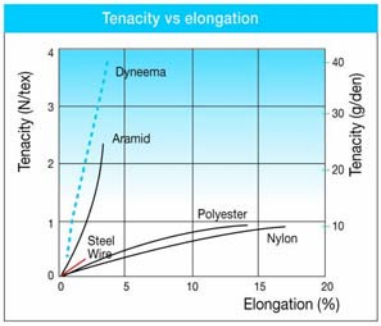
		DYNEX 75		IWRC	
mm	inch	kg/100m	MBL ton	kg/100m	MBL ton
56	7	154	221	1219	181
64	8	201	282	1592	237
72	9	254	348	2015	300
76	9.5	283	383	2245	334
80	10	313	419	2488	370

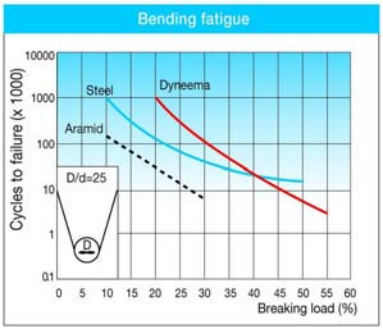
*) DSM´s registered trademark

Rope Properties

The main advantage of DYNEX rope is its high strength, yet low weight and diameter. DYNEX rope has very low elongation. Depending on construction, a worked rope will have elongation at break as low as 3-4%. The rope has excellent tension fatigue and bending fatigue surpassing that of steel at common working loads.







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