



OCTOBER 2011

Dynex Data tested on board Tróndur í Gøtu

The owners of Faroese pelagic flagship Tróndur í Gøtu were Hampidjan's first customers for its Dynex Data headline sounder cable.

demanded investment in new equipment to make production possible, and during which Hampidjan's engineers overcame a number of technical obstacles.

Tróndur í Gøtu is a sophisticated and well-equipped purser/trawler, fitted out – unusually for a new vessel – with a pair of sounder cable winches on the aft gantry. The decision was taken after discussions with the owners to load one of these two sounder cable winches with Dynex Data cable to test it under real conditions. The cable has been three years in development in a process that

The cable is the link between the headline sonar and the display in the ship's wheelhouse, giving the skipper a real-time image that shows the trawl's horizontal and vertical opening, as well as recording marks of fish entering the trawl mouth.

The ship was set to steam home after the capelin season in Icelandic waters last winter, hav-



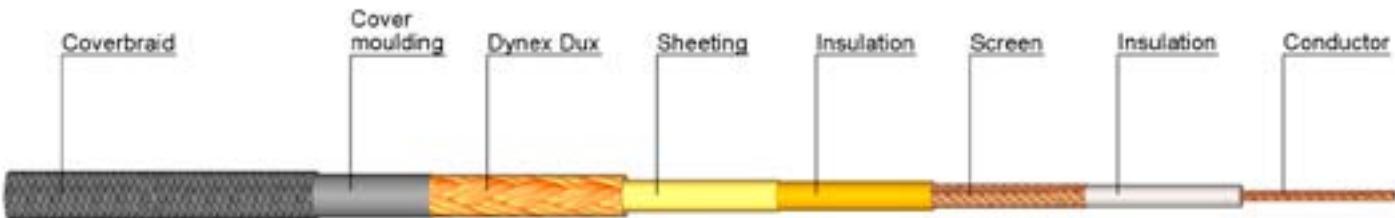
The latest newbuilding in the Faroese fleet, Tróndur í Gøtu, owned by Vardin P/F of Gøta in the Faroe Islands

ing made a landing at Fáskrúdsfjördur when 3000 metres of Dynex Data cable were loaded onto one of the drums. Tróndur í Gøtu's pelagic trawl was shot away 800 metres of Dynex Warp and towed at a depth of 200 metres off the Faroese coast.

1000 metres of Dynex Data cable were also shot and the gear was towed for a couple of hours with a tension on the cable winch of 1.70 – 2 tonnes. As the gear was hauled, the cable was seen to sit well on the cable drum without digging its way in between the previous



The Dynex Data installed to one of the two sounder cable winches by Hampidjan's technicians.



International Patent Application



Connecting Dynex Data cable to Simrad's FS70 trawl sonar.

layers. Signal strength to the wheelhouse was excellent and images from the headline sonar were both clear and steady. According to Valdimar Einisson, service manager at Simrad Kongsberg agent Fridrik A Jónsson ehf, the signal quality was good, communica-

tion with the gear was perfect and interference was minimal compared to the usual experience with steel cable. The resistance in the Dynex Data cable was measured at 40 ohms at 3000 metres. This low resistance means that there is less loss of strength, which is

a major advantage. Valdimar Einisson said that the voltage used depends on the type of headline sonar used. The old FS3300 model uses only 110v DC, but

newer models such as the FS925, TS10, TS15 and FS70 are made to run on 220v DC. In spite of this, many pelagic vessels are still using 110v with the newer equipment.

Dynex Data cable has many advantages over conventional steel cable

- Dynex Data cable has many advantages over conventional steel cable
- Dynex Data is higher in the water and does not foul the warps in a turn.
- Dynex Data does not lie high in the water when fishing on shoal marks, so the fish are less likely to be spooked.
- Dynex Data is lighter, with a relative density of 1,28, compared to 4,47 for steel cable.
- Dynex Data has the same or better breaking strength than steel cable.
- Dynex Data does not rust.
- Dynex Data does not go over and behind the trawl if too much cable is shot away.
- Contact with Dynex Data does not damage the trawl or warps.



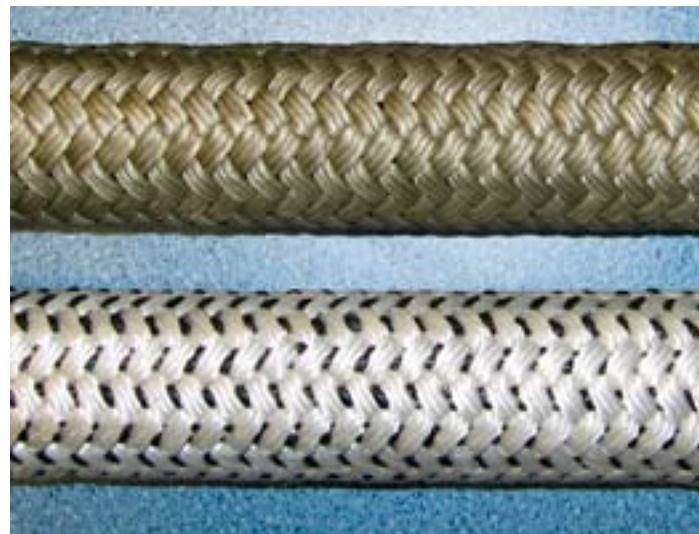
The 12mm Dynex Data cable coils relatively well onto the cable winch.

Fixed sleeve for Dynex Warps

When Dynex Warps began to be used, there were instances when the warp could catch on the side of the vessel and suffer damage, or even part the cover.

When this happened, there were problems in getting the ends of the cover back together and the first repair method was to use sections of sleeve to cover the exposed section and these were fastened to the ends of the existing sleeve. But now there is an even better solution.

This approach is based on ensuring the sleeve does not run and Hampidjan worked on developing a way of fixing the sleeve to the rope inside it together as the protective jacket is braided



Before and after the cement treatment.

around the rope. This has been successful and the picture shows how the cement used to fix the two together is forced out between the braiding of the sleeve.

This method of cementing the two together was first used with Hampidjan's Dynex Data head-

line sonar cable that has recently been tested on board Tróndur í Götum.

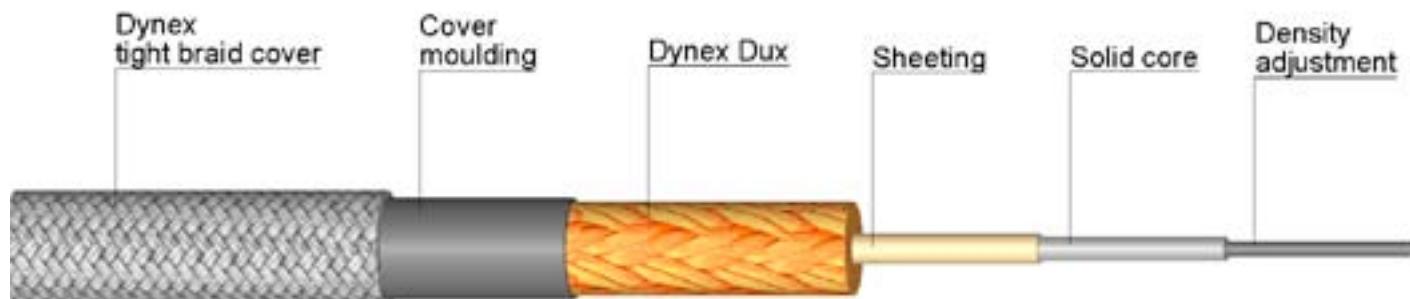
On that occasion there was an accident when the cable was fouled in the block and sleeve was damaged and parted, but did not run. So we can see that this approach promises well for both

Dynex Warps and Dynex Data cable in future.

Using this cement method also promises to give a longer working lifetime, as well as saving time at sea when repairs done on the spot can prevent further damage to the rope or cable inside the protective sleeve.



The structure of Dynex Warps.



Promising future for Dynex Data

said Sturla Einarsson, skipper of pelagic factory vessel Gudmundur VE

From: Gudmundur VE. bril [mailto:gudbru@shelaga.is]

Sent: 31. Agust 2011 20:44

To: Guðmundur Gunnarsson

Subject: Dynex-Data

Hello Guðmundur

I finally managed to take some pictures, it's a question how I manage to get them through to you.

We are using a Simrad FS70 headline sonar run on a 200v DC power supply. The picture quality is excellent and there is minimal interference, just what you'd expect to see towing close to the surface.

When we tow close at the surface with the headline kite deployed and with 200 to 230 fathoms of warp shot away, the sounder cable hardly touches the water until just before it reaches the kite, even with relatively little tension on the cable. I'm not sure how precise it is, but it shows a 0.50 tonne tension on the cable.

There's no doubt in my mind that when fishing close to the surface, not having a loop of sounder cable right in front of the gear to frighten the fish away makes some difference, not to mention the difference that the loops of hanging wire-warp can also make."

At this time of year the mackerel are keeping to increasingly tight shoals just under the surface if the weather is good and I proved to myself just how the warps can deflect a shoal of mackerel.

"There was a mark right under the hull that moved to one side, but by taking a sharp turn towards the mark, I hoped to be able to place it between the doors. Then I watched as we passed by and to one side of the mark and after I had taken a turn, it was set to drop between the doors. But with only a few dozen metres to go, the shoal took a 90° turn of its own past the door and I'm certain that it was the loop of warp in front of that door that spooked the shoal enough to make it escape." "If we'd been fishing with Dynex Warps, which don't hit the water until right in front of the doors, and Dynex Data sounder cable, we'd have had a good chance of scooping up that particular mark of mackerel."

"We have been using Dynex Data cable now for two months and our experience with it so far has been excellent in every way. There's no reason to believe that this is anything other than a very positive development."

Regards,

Sturla Einarsson, skipper of pelagic factory vessel Gudmundur VE-29

Promising future for Dynex Data



Skipper Sturla Einarsson



Pelagic factory vessel Gudmundur VE-29 steaming out from its home port in the Westmann Islands



Protection tube

Dynex stopper

Hook to link to the crow's foot

The headline crow's foot used to link the Dynex Data cable to the trawl sonar. Simple and secure.



A thousand metres of Dynex Data spooled onto the sounder cable winch

Björgvin flies Apollo Xstream doors

Samherji Akureyri bought in February a pair of 6.5m², 2000kg Apollo Xstream pelagic doors for its freezer trawler Björgvin EA-311, which operates from Dalvík in the north of Iceland.

These doors are used to spread a Hemmer T90 bottom trawl, supplied by the Fjardanet net loft in Akureyri, with the expectation that Björgvin would switch to fishing with flying doors on a permanent basis.

A few changes had to be made to the fishing set up on board. Unlike conventional bottom trawling with the doors towed in contact with the sea bed, a pair of pelagic doors are used to 'fly' five to ten me-



tres off the ground to provide spreading force for the gear. Weights are attached to the leading ends of the bridles to provide the necessary downward force to keep the Hemmer trawl itself on the ground while towing.

Experience has shown that this method has proved very successful for catching demersal species. There are advantages in significantly reduced

maintenance, as the doors are not in contact with the ground and therefore do not suffer abrasion and damage. There is also noticeably less wear on the bridles and lower wings of the trawl, as the gear appears to move more easily across the ground than with bottom doors.

Skipper Agantyr Arnar Árnason, best known to us and his crew as Arnar, was very positive about the new doors when he saw them last year. The new design incorporates ventilated slats on the rear face of the doors that force the flow of water forwards along the camber of each door, resulting in an increase in squaring power of as much as 25%, depending on the towing speed. This gives the doors

the doors fulfilling every expectation while fishing. His only reservation was that he could see the doors over-spreading while the gear was being hauled, a problem which was by selecting a different bracket setting.

Björgvin's Hemmer trawl is towed with 75 to 80 fathom bridles, which he told us provides a spread between the doors of between 75 and 90 fathoms, depending on the nature of the ground and the strength of tide and currents. The Apollo doors maintain their distance very well during towing, both with and against the tide.

He commented finally that this new gear arrangement has made trawl fishing much greener with reduced ground contact that is more environmentally friendly to benthic organisms.

Arnar Árnason said that as a fairly conservative skipper who does not normally believe in making changes to something that already works, he feels that this was a very worthwhile development that has already paid for itself.



Hemmer bottomtrawl with sweeplines and Apollo Xstream midwater doors.



Photo: Porgeir Baldursson

Samherji's factory trawler Björgvin EA-311

improved stability with a more constant relationship maintained between warps, doors and trawl while towing, as well as in shooting and hauling the gear and when taking a turn. Skipper Arnar Árnason told us that he is delighted with the performance of his gear, with

New capelin purse seines

Managers at Hampidjan and fishing company HB Grandi have agreed on a contract for two new 'deep' capelin purse seines for delivery in October this year.

Deep seines are used in deep water during the first half of the capelin season in early winter, north and east of Iceland, while shallow seines are used once the capelin migration along the south coast reaches Ingólfshöfði.

A deep seine catches capelin at a depth of around 30 to 40 metres, and when the gear is shot around a mark at this sort of depth, a large enough

bag needs to form around it to keep the capelin inside while the gear is pursed. The real size of the seine in use is 96 fathoms, but what is not so obvious is that something like two-thirds of this is depth is needed to hold everything together while pursing.

The new HB Grandi purse seines have 637 metre corklines, 715 metre leadlines and have a maximum depth of 204 metres. The finest twines used in them are 1.10mm (210/24) and the heaviest are 2mm (210/72). The strengthening panels are lengthened from 4 metres to 10 metres, each side of the main body of

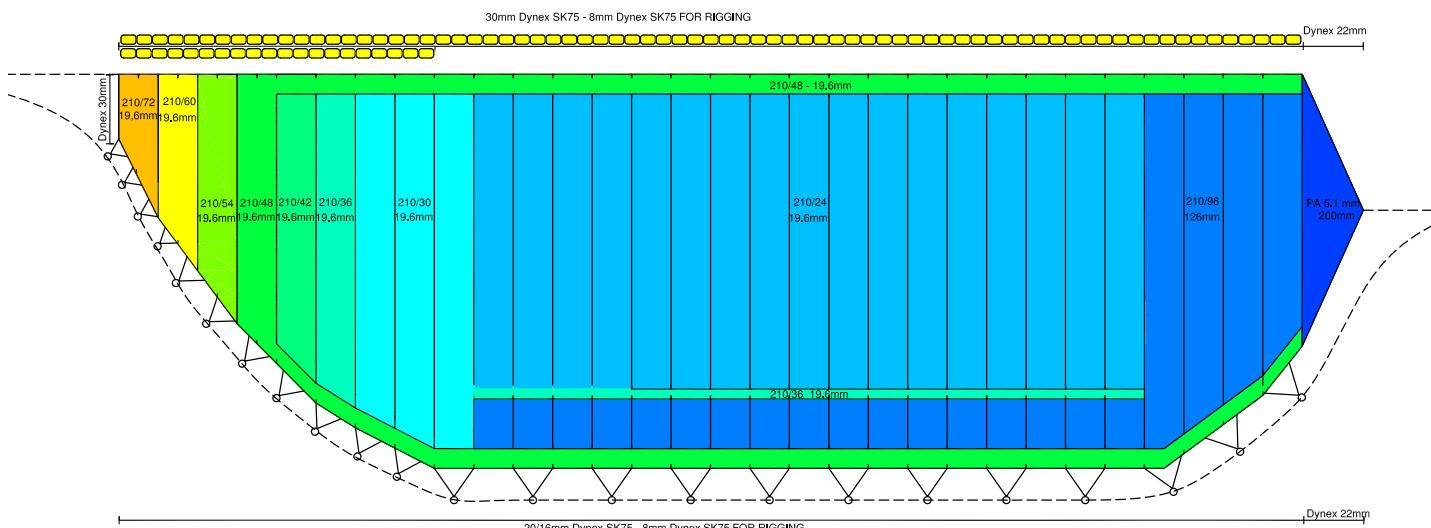
netting, so as to make it possible to deploy them under difficult conditions when the fish are moving fast in a strong current or when fishing in bad weather. The bags of these purse seines are made in heavy-gauge twines to allow them to hold the substantial catches that can run to several hundred tonnes in a shot. It's important that the strength, cut and rigging of the gear all fit together when a large catch is being dried out into the bag. Large meshes (126mm) are used for some sections of the triangles of the purse seines. This makes them lighter and easier to handle on

board, as well as lighter to purse after shooting. Each of these purse seines has a dry weight of approximately 50 tonnes.

The frame lines are made in braided Dynex rope, with 30mm rope in the corkline and 20mm/16mm in the leadline.

In the mid-1990s, Thorsteinn Kristjánsson, skipper on Hólmaborg SU-111, said that using Dynex in purse seines was a real revolution in fishing gears (Catch On, June 1998). His comments have certainly been proved right, as very few purse seines today use anything other

CAPELIN PURSE SEINE 630x198m



than Dynex for frame lines. This was such a step forward at the time that few other developments in fishing gear technology can be compared to it, other than the switch to synthetic materials from cotton.

The Dynex lines are strong, light, have a high abrasion resistance and do not twist.

They make stacking the gear easier and take much less space on board than the triple ropes that they replaced.

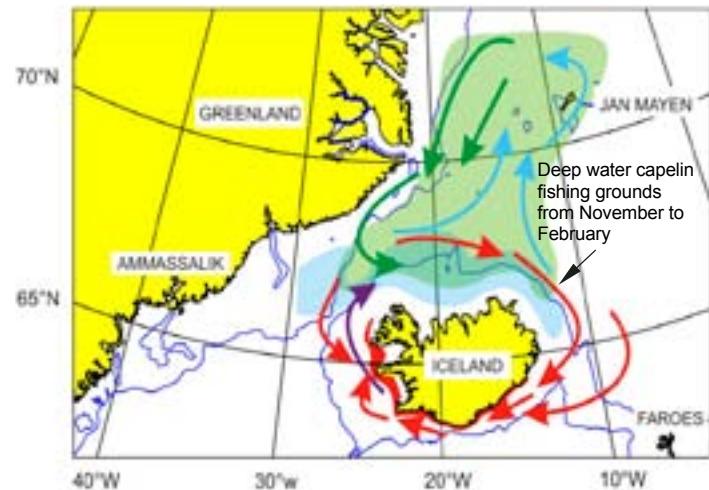
Making and maintaining purse seines with Dynex lines is also much easier, accounting for hundreds of hours in saved labour, as well as which making it possible to do away with the enormous number of seizings that were previously needed. Instead, loops of the rigging line are pulled through the Dynex rope.

A stopper rope that runs along the length of the line is then pulled through the loops to keep the bights of the rigging line in place.

Master netmaker Vernhardur Haflidason designed the two purse seines in co-operation with staff at HB Grandi's vessel operations department,

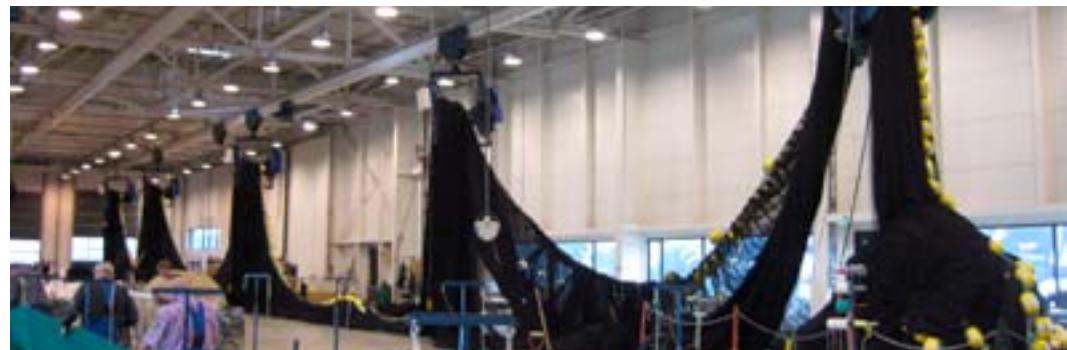
and everyone expects that these purse seines will be successful, as well as lasting through many seasons of good capelin fishing.

Reference:
Hjálmar Vilhjálmsson 2002.
*Capelin (*Mallotus villosus*) in the Iceland-East Greenland-Jan Mayen ecosystem. ICES Journal of Marine Science* 59: 870-883.



Distribution and migration of Icelandic capelin.

Blue shade: Distribution of juveniles;
Green arrows: Feeding migrations; Blue arrows: Return migrations;
Red arrows: Spawning migration
Violet arrows: Larval drift



Hampidjan's well-equipped netloft in Reykjavik



The corkline of a capelin purse seine



The leadline of a capelin purse seine



Hampidjan sales and marketing director Haraldur Árnason and Vilhjálmur Vilhjálmsson, manager at HB Grandi's pelagic division, signing the contract for the new capelin purse seines

Faxa Bay capelin furore

Heavy fishing, bad weather and busted gear

There was plenty to be done at Hampidjan's net loft when purse seiners Lundey, Tróndur í Gøtu, Beitir and Adalsteinn Jónsson all tied up outside for their gear to be fixed during the fishery last February for this small, but highly valuable species that spawns in Faxa Bay.

Hampidjan's netmakers had to work fast and to a schedule in a way that happens with purse seine gear needs to be fixed when the fish are only there for a short time. It was a pleasure to see how quickly they made



*Photo: Ólafur Óskar Stefánsson
Purse seiner Kap VE-4 in Faxa Bay, hauling capelin gear in heavy weather*

every effort to get these emergency repairs done during the short season and such as the concentration and pace of work, it was almost as if the repair teams had shares of their own in the fishing companies.

There were several different repair types, from burst netting due to the

high pressure of big bags of fish on the gear, as well as parted frame lines and damage due to purse wires or the propeller snagging the netting. But the main reasons for gear damage are that classic pairing of bad weather and big catches. There was a steady blow from the south-west at the time, bringing some heavy sea running straight into the bay with wave heights of eight to ten metres at their worst.

The capelin tend to be heavier in the gear as they approach spawning and there is plenty of tension on the gear when de-

ploying fishing gear with 500 to 600 tonnes inside it while the weather is also heavy. Under these circumstances not much needs to go wrong for the gear to give way under the pressure exerted by natural forces that test both fishing vessels and their gear.

Capelin gear has seen a good few changes in recent years as we have seen larger and more powerful vessels joining the fleet. A 'shallow' seine today is roughly the same size as a 'deep' seine was a few years ago before the fish migrated into the shallows off the south-east coast.

Hampidjan's busy netmakers working on purse seine gear



A shallow set of gear has a corkline of 220 to 250 fathoms with a depth of 50 to 60 fathoms.

Deep gear has also grown, and today one of these seines will measure 300 to 330 fathoms along the corkline and will have a depth of between 75 and 90 fathoms. One of the main changes has been the introduction of Dynex super rope in both corklines and lead-lines. This was first tried out on board Westmann Islands pelagic vessel

Huginn in 1996.

In brief terms, that experience was extremely promising.

As skipper Gudmundur Huginn Gudmundsson said: 'Flaking the gear down in the net bin is much lighter. The frame lines aren't stiff and take less space, and the gear folds away much better. There's no chance of the rigging line being caught up and pulled as it is rigged by being taken through the corkline itself.'

The use of Dynex rope for purse seine frame lines has resulted in significant labour savings, according to Vernhardur Haflidason, the master netmaker in charge of Hampidjan's purse seine division.

Rigging a purse seine on Dynex takes roughly a quarter of the time it used to take to rig two or three lines together using old-fashioned seizings.



Busy seaming two capelin sections together

No more steel warps!!

Cara Rawdon owner and skipper of the successful Greencastle trawler, Catherine R has been using Dynex warps now for over a year and is extremely pleased with their overall performance.

In the past, the Catherine R has had to replace 350 fathoms of its 700 fathoms/side steel wire every 6 months, but since changing to Dynex warps, the improvements and benefits of using them are already being seen and Cara predicts quadruple the usage time or more than that of the steel warp option.

Cara Rawdon has recently extended the length of the

Dynex warps to 500 fathoms per side, showing his faith in this ground breaking product.

Dynex warps are 7 times lighter in air and 40 times lighter while towing in water than their steel warp counterparts.

Mr Rawdon stated that instead of saving on fuel, he has towed at the same litres/hour covering more ground & hence increased on his catch.

The Catherine R heaves its bridles on its warp winches, so the steel bridles are going over the Dynex warps without any damage, a testament to how robust its exterior cover is.



Greencastle trawler Catherine R. Reproduced courtesy of fishing newspaper The Skipper

He also added that any vessel which has separate winches for their bridles or uses their net drums, will see the Dynex warps last a minimum of 10 years.

"A great option of these warps is that you don't have to change all of it at once, you can increase your lengths as you go along. I firmly believe that once you try these warps, you will never

return to steel again. It is easier on your boat, machinery and a lot safer for the crew," Cara added.

For more information on Dynex warps, contact Swan Net Gundry, our sales team will be happy to assist you with any queries.

"It just lasts and lasts..!"

"It just lasts and lasts..!" It constantly takes us by surprise just how well Dynex rope lasts in so many different applications.

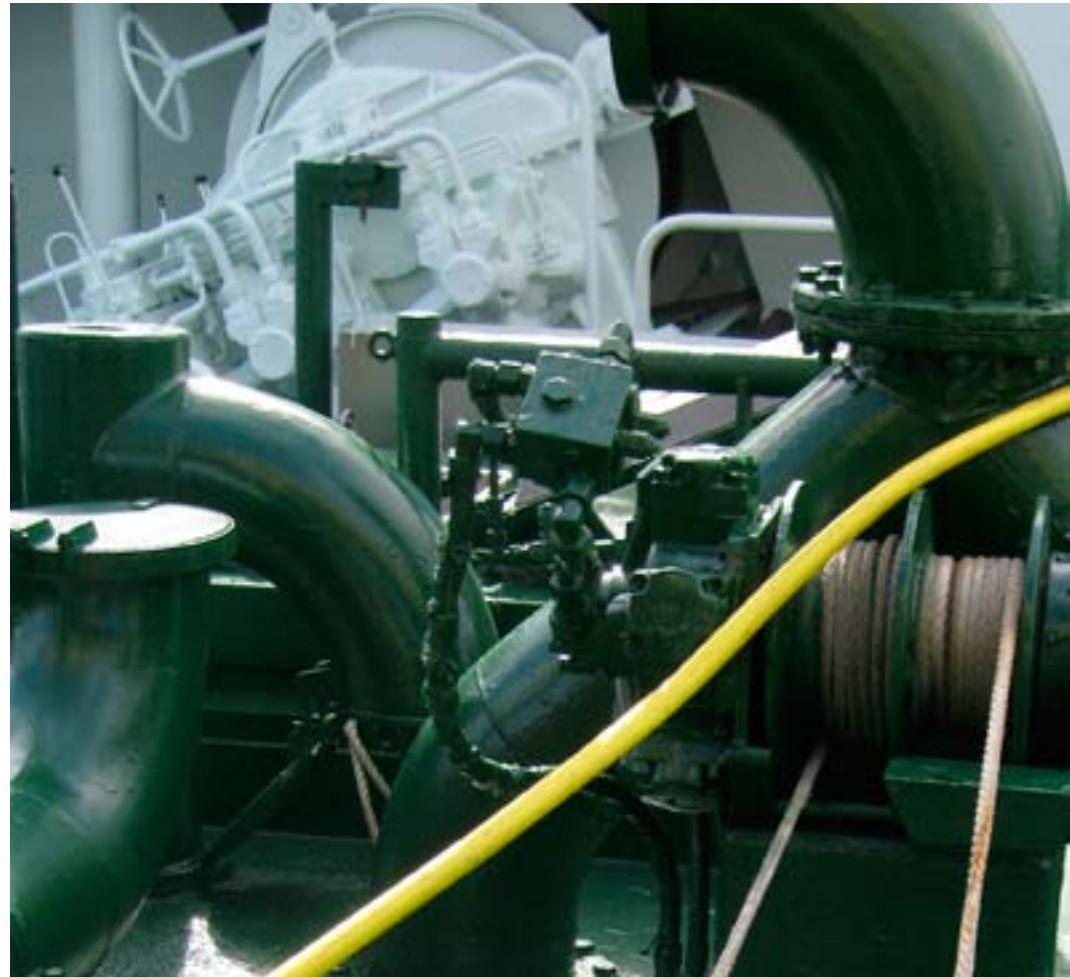
On board pelagic vessel Ingunn AK-150 there is a 20 metre length of 10mm Dynex rope that is used to move the water separator, depending on which tank the fish is being pumped into.

This rope is used on a doubled winch drum and runs to the separator, running from there to a block on the wheelhouse side and over to another winch drum on the forward side.

This is done to reduce the tension on the rope and to do away with any danger of it parting – and for just these reasons a length of steel wire was used before the Dynex rope replaced it.

The steel wire never did part, but instead had to be replaced every six months as it would rust.

Now, after six years, the Dynex is practically as good as new.



The long lasting Dynex rope and the separator equipment.

However, it was replaced when a spring link that the Dynex rope was spliced into on the separator failed due to rust damage and was replaced last winter. According mate and relief skipper and mate Róbert Axelson, the rope would probably have stayed there if the spring link hadn't failed. As he said, Dynex just lasts and lasts.. As far as we are con-

cerned, this is another example of how well Dynex deserves its reputation as a SuperRope and performs fantastical-

ly even when unprotected against wind, weather and sea water from one year's end to the next.

Ingunn AK Receiving fishing gear from Hampidjan.



Dynex moorings for LNG tankers

Hampidjan recently supplied a US gas tanker operator with mooring lines, and Mooring Solutions Inc opted for 48 mooring lines for its fleet of three liquid natural gas (LNG) tankers that operate worldwide. The package from Hampidjan comprises 200 metre lengths of 39mm diameter Dynex rope, each one covered with a braided protective jacket.

The fleet

These are not small ships – each one measures 285

metres with a 46 metre beam and they draw 11 metres. These ships are capable of carrying a 126,300m³ payload and achieve a top speed of 20 knots.

Hampidjan Baltic was able to respond rapidly to this unusual request and the order was delivered on time a month after it was placed.

The reasons for choosing Dynex rope are down to new regulations prohibiting LNG tankers from using steel wire rope for



'A giant tanker used to transport liquid natural gas around the world'

mooring lines, due to the hazards presented by mooring with steel wire against steel bollards ashore that can produce sparks, especially in the event of sudden tension on the wire.

These security requirements can in part be traced to a new atmosphere of extensive security requirements being overhauled on a very wide basis in the USA following the

9/11 attack on the World Trade Center in New York in 2001.

There has been an ongoing and particularly high-profile debate underway in the USA regarding environmental and security issues, and the general public has become well informed of the dangers that accompany transporting oil and gas transport by sea.

Gloria redfish trawls sold to Russia

A number of the Russian vessel operators in Murmansk and Kaliningrad took the opportunity to renew their Gloria pelagic trawls ahead of the deep sea ocean redfish season in the Irminger Sea earlier this year.

Most of them opted for a self-spreading Gloria trawl made in Helix ropes that has the advantage of holding the opening better in a turn or at slow towing speeds, making them

more effective than other trawls.

The Helix ropes contribute to spreading the gear better while towing and keep the belly fully open, which improves the flow of water and helps the redfish find its way down to the codends more easily.

Russian operators have also made a step forward by switching to Dynex sweeplines, replacing the three-stranded steel wire rope that they have used

for decades. This type of wire was popular as it was felt that it twisted less than the normal six-stranded wire rope. Now, around half of the Russian vessels are using Dynex sweeplines.

By using Dynex sweeplines, all of the twist is eliminated as Dynex has a twelve-stranded braided construction. In addition, Dynex sweeplines are significantly lighter in water than steel wire and

have the big advantage of not being susceptible to rust. While steel wire sweeplines can often last only a single season, Dynex sweeplines that have been looked after will last for many years.

Gloria redfish trawl shot away in the Irminger Sea.



Mackerel fleet south-west of Iceland



There was plenty happening on mackerel fishing grounds south-west of Iceland's Reykjanes Peninsula this summer, as the AIS map showing ship movements clearly demonstrates.

Most of the trawlers taking part finished their quotas on schedule, according to figures from the Directorate of Fisheries.

Mackerel were caught over a wide area, close to the surface, making it vital to keep pelagic trawl gear high in the water to have any hope of fishing successfully on this valuable species.

In early 2010 Hampidjan launched a new version of its Gloria pelagic trawl designed

specifically to meet the demands of the fleet operating on mackerel.

This trawl is made in different sizes with a fishing circle ranging from 400m to 2080 metres in circumference, depending on each vessel's towing capacity.

Apollo Xstream doors are used to spread the gear, and these have been highly successful with V-rigged attachments that give them a better level of balance when towed close to the surface.

A great deal of emphasis has been placed on maintaining the optimum quality of the mackerel and Hampidjan's trawl designers developed a special T90 codend for this fishery that has resulted

in less pressure on the fish than with standard pelagic codends.

The codend netting expands and takes on a cylindrical shape, with the added advantage of 50% faster filtering of water through the netting than with standard gear.

This keeps the fish alive in the gear until the gear is hauled and a number of fish processing plants have confirmed that there is a real quality difference between mackerel caught in T90 codends and standard trawl bags.

Several of the skippers fishing for mackerel have also been using Dynex warps instead of steel wire and they have all agreed that these lightweight warps represent a significant advantage over conventional steel wire rope, particularly when manoeuvring to keep the gear as high in the water column as possible to target high-swimming mackerel.

New multipurpose Gloria pelagic trawl