PROJECTS
OVERVIEW

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Stainless UK

Stainless UK

COMPANY **OVERVIEW**

For over 40 years the directors of Stainless UK have pioneered the use of stainless steel in civil and geotechnical engineering.

They understand their customer's needs for high corrosion resistant, certified, quality products to be manufactured to individual specifications quickly and efficiently and have continually invested in suitable production processes and high stock levels to achieve this.

Stainless UK Ltd is a specialist manufacturer and stockholder of stainless steel reinforcement, anchors, tie bars, Grip-Bar® and fabricated products for the civil engineering and geotechnical industry.

Unique amongst Stainless UK products is Grip-Bar a high strength stainless steel rolled threaded bar for rock anchors, soil nails, masonry and concrete fixing.

We are a CARES approved supplier for a full range of rebar and also stock dowel bar, studding and anchor products in Grades 304 and 316 stainless steels.
A full range of accessory products including pattress plates are available.
Fabricated products are made to order.

Stainless UK Helps with Dawlish Storm Damage Repair

On the night of 4th / 5th February 2014 a major storm hit south west England and swept away part of the sea wall at Dawlish severing the main railway line into the West Country.

On Friday 7th February, Stainless UK received an order from CAN Geotechnical, part of the team of contractors assembled to carry out repairs, for the supply of marine Grade 316 stainless steel Grip-Bar fully threaded anchor bars for use in tying together the new concrete wall that had to be constructed.

With the urgency of the repairs, Stainless UK quickly organised a weekend shift in their Sheffield factory to start manufacturing the 6m long, 36mm and 39mm Grip-Bar anchors. This enabled the first delivery of bars to be made on Tuesday 11th February.

In total Stainless UK supplied over 1260 Grip-Bar anchors together with 20mm thick end plates and fixings to the Devon site. These were used in conjunction with 5000 tonnes of concrete to fill the breach in the wall.

In total 200m of new track was installed by a workforce of over 300 people that had been assembled to carry out the work. This enabled the line to be re-opened at the beginning of April in time for the Easter holiday period.

Giant Bars for Scottish Quay from Stainless UK

Stainless UK have supplied 23 giant solid round stainless steel bars with a 5” diameter and 3m long for use in the construction of an extension to the quay at Campbeltown Harbour on the Kintyre peninsula in Scotland.

The bars weighing over 100kgs each were used in the new piled wall built to form the new quay.

Since 2005, Campeltown has developed into a major port used by local manufacturers of wind turbine components. With turbines getting bigger, larger ships are required to transport the components. To facilitate this, a new 140m long quay wall has been built and the quay dredged and lowered by 3m. The finished quay, which has been funded by Argyll and Bute Council, will accommodate the F-type vessels currently being used and be capable of handling the larger S-type vessels expected to be used in the future.

The bars supplied by Stainless UK are in a Duplex Grade 1.4462 (F51) stainless steel. This material has been selected because of its high resistance to pitting and crevice corrosion in a chloride environment such as the new harbour wall.

Grip-Bar Anchors Hold Firm on Guernsey Lighthouse

Stainless UK has supplied marine grade stainless steel Grip-Bar anchors and reinforcing bar to local contractor Geomarine for use in repair work to the landing steps at Les Hanois Lighthouse off the channel island of Guernsey.

Les Hanois Lighthouse stands 33m high and is situated off the islands south west coast. Opened in 1862 and built from Cornish granite to a new design by James Douglass, the lighthouse was constructed to warn shipping of the dangerous shoals and reefs which form the Les Hanois group of rocks. Operated by Trinity House, the flashing light can be seen from a distance of 20 miles.

Key to the work was the stabilisation of the steps with the use of 24mm Grip-Bar stainless steel anchors which were grouted into holes drilled into the rock and secured with circular stainless steel end plates. Stainless steel ribbed bar was also used to reinforce the repair work carried out to the steps. All the stainless steel used was marine grade 316, specified to ensure a long working life in this challenging environment.

Stainless UK Stops Blackpool's Comedy Carpet from 'Cracking Up'

When thousands of people head to Blackpool, many will have admired the 'Comedy Carpet' on the sea front which commemorates the great names of seaside entertainment.

Few, however, will have realised that its structural integrity relies on stainless steel mesh made by Stainless UK of Sheffield who have supplied 170 panels to reinforce the concrete slabs.

The £2.6m Comedy Carpet was commissioned by Blackpool Council as part of a project to regenerate Blackpool sea front. The 2,200m^2 work of art was created by artist Gordon Young in collaboration with Why Not Associates. Situated in front of Blackpool Tower, the carpet leads from the tower entrance to the beach and connects the north and south ends of the promenade. The carpet celebrates the history of entertainment in Blackpool with the words of jokes, songs and catchphrases made famous by over 1000 comedians set into the concrete slabs.

Stainless UK manufactured the 4m x 2m welded mesh panels in their Sheffield factory. Each panel was set into an individual concrete slab to strengthen the concrete and control shrinkage cracking.

Lundy Island

Lundy Island lies off the North Devon coast in the Bristol channel. The 3 mile long granite outcrop is administered by the Landmark Trust and designated a Site of Special Scientific Interest with the surrounding seas a Marine Nature Reserve.

The only access to the island is by sea and to improve links in all weathers, a new 90m long jetty with associated harbour facilities and access road was constructed. Stainless UK supplied marine grade 316 Grip-Bar for use as tie bars on the jetty and as rock anchors in the new sprayed concrete sea wall.

Chepstow Castle

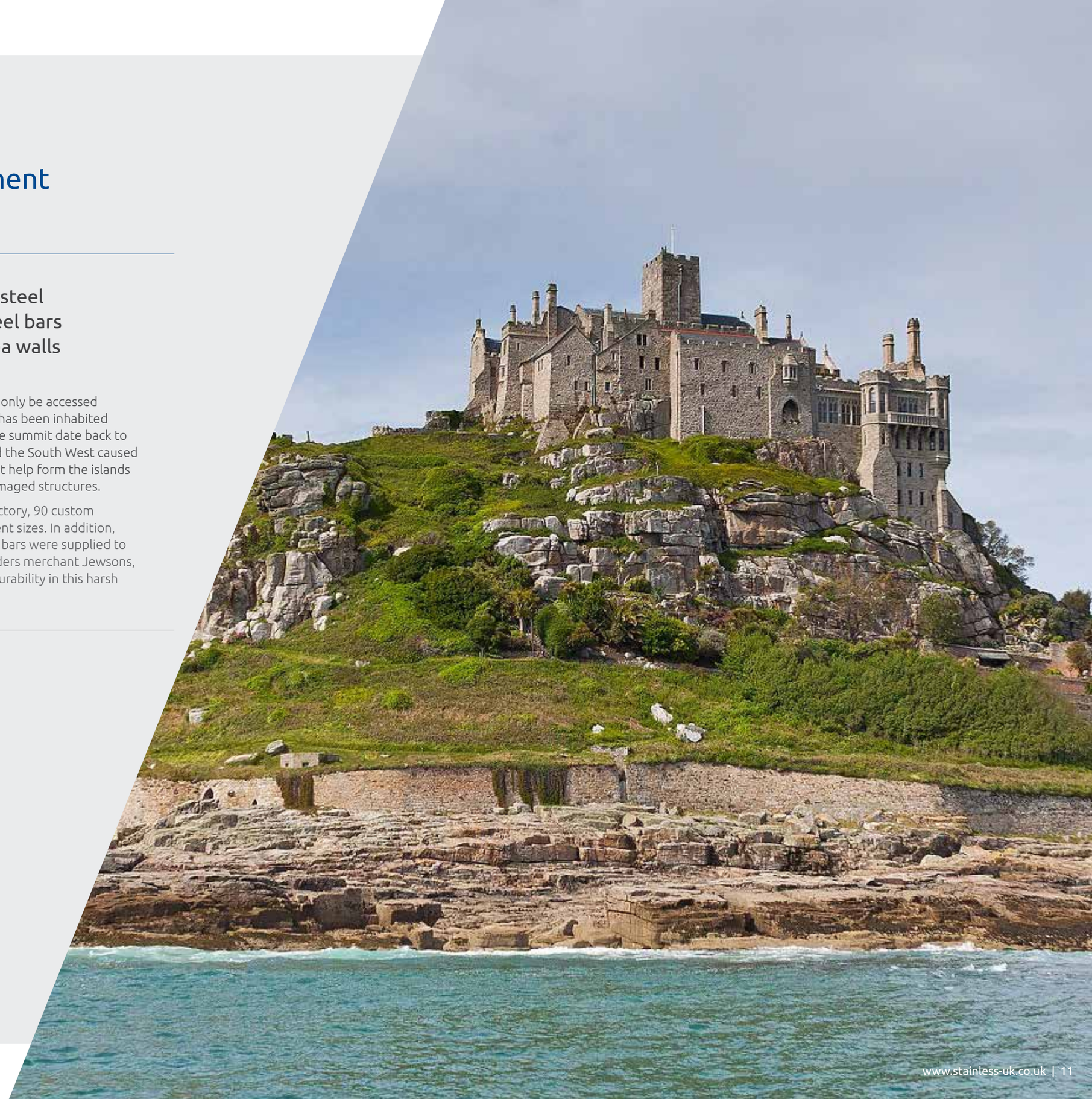
Located on the cliffs overlooking the River Wye, Chepstow Castle dates back to Norman times. Now a popular visitor attraction and also a regular location for film and TV, stainless steel Grip-Bar anchors were used for stabilisation of the rock face beneath the castle walls.

Stainless UK Supply Reinforcement for St Michael's Mount

Stainless UK have supplied 650m² of stainless steel reinforcing mesh and nearly 3000 stainless steel bars for use in repair works to the causeway and sea walls at historic St Michael's Mount in Cornwall.

St Michael's Mount is a small tidal island off the Cornish coast that can only be accessed by a man made causeway between mid tide and low water. The island has been inhabited since Neolithic times and the monastic buildings currently found on the summit date back to the 12th Century. In early 2014 the severe winter storms that battered the South West caused significant damage to the granite setts causeway and the sea walls that help form the islands harbour. In late 2014 major repair works were started to repair the damaged structures.

To assist in the repairs, Stainless UK manufactured in their Sheffield factory, 90 custom made stainless steel type A252 reinforcement mesh panels in 2 different sizes. In addition, over 3,000 cut and bent ribbed reinforcement bars and smooth dowel bars were supplied to the site. All the steel supplied for the work on the island, through builders merchant Jewsons, was marine Grade 316 type stainless steel specified for its long term durability in this harsh coastal environment.



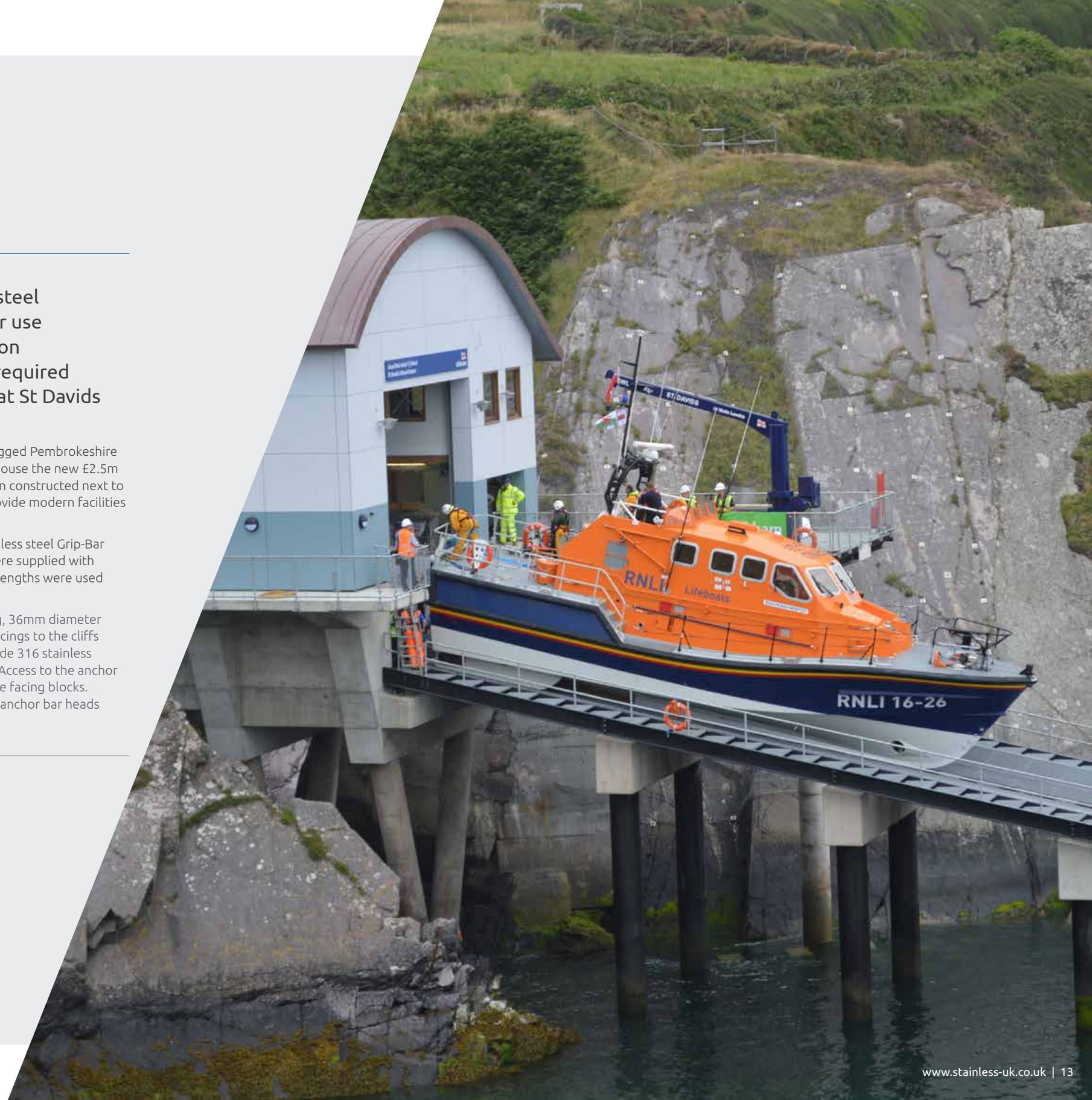
Grip-Bar Anchors Used for New St Davids Lifeboat Station

Stainless UK have supplied over 120 stainless steel Grip-Bar anchors to contractor BAM Richies for use as soil nails, rock anchors and special foundation assemblies as part of the geotechnical works required for the construction of a new lifeboat station at St Davids on the Pembrokeshire coast.

For over 140 years a lifeboat has been stationed at St Davids on the rugged Pembrokeshire coast. The old lifeboat station was over 100 years old and not able to house the new £2.5m Tamar class lifeboat. A new £9.5m lifeboat station and slipway has been constructed next to the old boathouse which is able to house the new lifeboat and also provide modern facilities for the 2 full time staff and 28 crew volunteers.

To stabilise the cliff face around the new station, 20mm diameter stainless steel Grip-Bar anchors in 2m and 3m lengths were used as soil nails. Square plates were supplied with each anchor to secure the rock netting. 30mm Grip-Bar anchors in 8m lengths were used as rock anchors in the most unstable areas of the cliffs.

Stainless UK also manufactured in their Sheffield factory the 8.5m long, 36mm diameter Grip-Bar anchors that are being used to tie back reinforced concrete facings to the cliffs which will act as column supports for the new lifeboat station. The Grade 316 stainless steel anchors bar are set into the rock face at 25˚ and then tensioned. Access to the anchor heads has been maintained by casting a recessed area into the concrete facing blocks. Custom made stainless steel covers have been supplied to protect the anchor bar heads and provide for future access if required.



Grip-Bar Used in Preservation Works at Ilfracombe Harbour Wall

Stainless UK have supplied over 800 Grip-Bar stainless steel tie bars for use in the restoration work carried out on the Grade 2 listed Old Quay Head at Ilfracombe Harbour in North Devon.

The wall forming the Old Quay Head at Ilfracombe dates back to 1760 and helps provide protection for the fishermen and boat owners who regularly use the popular harbour. Since the year 2000, the harbour wall has been subject to structural problems and following a number of temporary repairs a £1m refurbishment project has been carried out to provide a more permanent solution with the construction of a new concrete wall which is faced in natural stone.

To stabilise the new structure, Stainless UK has supplied over 800 of their 20mm and 24mm Grip-Bar stainless steel tie bars in lengths from 1.5m to 3m complete with 8mm thick end plates and fixings. Manufactured from marine Grade 316 stainless steel, the Grip-Bar system is designed to give a long service life in a harsh environment. Due to the difficult site access and tidal conditions, the Grip-Bar was installed by specialist rope access company Abcas (UK) Ltd.

Stainless UK Anchors for Art Deco Pool in Penzance

Stainless UK has manufactured nearly 100 stainless steel Grip-Bar anchor bars for contractor Saxton Drilling Ltd to use on a major restoration of the iconic, art deco Jubilee Pool in Penzance.

First opened in 1935 to celebrate the Silver Jubilee of King George V, the pool is now Britain's largest surviving outdoor seawater lido. Designed by the then borough engineer, Captain F Latham, the pool is triangular shaped and follows the line of the coastal rocks. During the winter storms of February 2014, the pool was battered by high winds and swamped by the exceptional high tide. This caused serious structural damage to the pool and now a major restoration project is underway to return the listed lido to its former glory.

The 33mm diameter Grip-Bar anchors have been manufactured in 2 sections which are joined with full strength couplers to form 8m and 9m long bars that will be used to anchor the pool floor to the rock bed and for repairs to the external walls and structure. Made from a marine grade 316 stainless steel, the Grip-Bar anchors have been supplied complete with 20mm thick end plates and fixings.

Tintagel Castle

Tintagel Castle in Cornwall dates back to medieval times. Situated on a coastal peninsular the cliffs below the castle are subject to constant erosion. Grip-Bar was used for anchors to help stabilise the rock face.

Blackhead Lighthouse

Blackhead Lighthouse is situated at northern extremity of Belfast Lough in Co. Antrim. Opened in 1902, it is one of 70 lighthouses operated by the Commissioners of Irish Lights. When opened Blackhead lighthouse had both a light and explosive signal to warn passing shipping in fog.

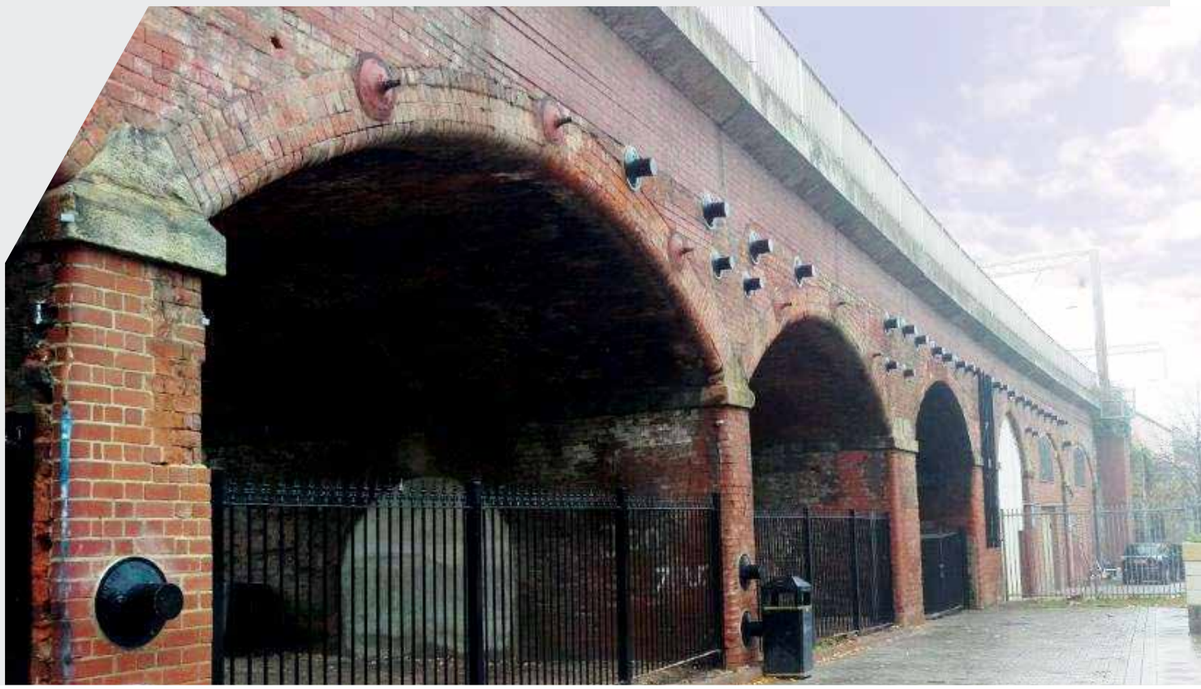
At the foot of the steep cliffs below Blackhead Lighthouse, a coastal path from nearby Whitehead runs around the headland. To protect walkers from rock falls stainless steel Grip-Bar anchors with plate washers were used to help stabilise the rock and to secure steel netting to the cliff face.

Stainless UK Strengthens Historic Leeds Viaduct

Stainless UK have supplied over 50 stainless steel Grip-Bar tie bars assemblies to Dyer & Butler Civil Engineering for use on the first phase of major repair works to the historic Marsh Lane Viaduct on the edge of Leeds city centre.

Marsh Lane Viaduct was opened in 1869 when it was decided that Leeds original rail station was located too far outside of the city and that a new more central station was required. The viaduct was constructed as part of the rail line extension between the original Marsh Lane station and the new Leeds City station. It now forms part of the eastern route into Leeds City station with a number of small businesses operating beneath its arches.

In 2015 a major renovation project was began to strengthen the brick built structure. Stainless UK have supplied over 50 sets of stainless steel tie bar assemblies for the initial part of this work. The bars were formed using the company's unique fully threaded Grip-Bar fully product supplied in 24mm, 30mm and 39mm diameters. These were fixed through the width of the viaduct and secured at each end using cast iron pattress plates. The plates were supplied with custom made end caps and painted black to N1 Rail Specification.



Grip-Rib Saves Time on Cliff Stabilisation in Jersey

Stainless UK has supplied 990 stainless steel rock anchors and fixing plates to secure rock fall protection netting to the cliff face at Greve De Lecq in Jersey.

The rock anchors were installed by local contractor Geomarine as part of a project to stabilise the cliff face.

Greve De Lecq is a popular tourist beach situated at the bottom of a steep cliff on Jersey. Overhanging rock was becoming increasingly unstable and the project required the removal of this material prior to fixing protective steel netting.

To secure the netting, Stainless UK supplied 20mm and 24mm diameter Grip-Rib anchors with metric threaded ends. Manufactured from a marine grade 316 stainless steel, the high tensile strength of the bars allowed smaller diameter bars to be used, so saving money with less drilling time being required. Grip-Rib has a unique continuous rib pattern which provides an excellent bond in the fixing mortar. The metric thread at the end of the bars was thread rolled onto the bar. This process produced a thread without removing any material from the bar and so maintained the strength of the threaded section.

The rock netting was held in place with a 10mm thick stainless steel plate at the end of each bar.

Geomarine said “The pre-cut lengths of Grip-Rib with the metric threaded ends was suited to this project and offered considerable cost savings and benefits to both our Client and Geomarine”

Stainless UK Helps Keep the Lights Turned On in Scotland

Stainless UK have supplied over 1000 meters of stainless steel Grip-Bar for use as rock bolts in the Lochay Tunnel which is used to transfer water to the Lochay Hydro-Electric Power Station.

Lochay Power Station was originally built in the 1950’s as part of the Breadalbane Hydro-Electric Scheme which supplies power to 65,000 homes. The Lochay Tunnel forms part of a 9km pipeline and tunnel system which carries water from Stronuich to the Lochay Power Station which is the largest in the Breadalbane scheme.

As part of a major refurbishment scheme, Stainless UK has supplied l000 lengths of 16mm and 24mm diameter Grip-Bar for use as rock bolts. The 1m length bars were grouted into the quartz schist tunnel face to provide support by ground engineering contractor BAM Richies.

The contractors were originally going to use a threaded galvanised rebar but quickly realised that Grip-Bar had many advantages in terms of corrosion resistance, high tensile strength and bond strength.

The effectiveness of Grip-Bar in high load bearing applications has been shown in tests at the University of Sheffield Civil Engineering Department. These showed that in cementitious grout, the bond strength was between 2.8 and 4.8 times higher than for convention stainless steel reinforcing bar in axially loaded applications.

Stainless UK Supply Rock Bolts for Dinorwig Tunnel Maintenance

Stainless UK have supplied over 200 stainless steel ribbed bars to SES Contracting for use in the latest phase of a rock bolt renewal programme at Dinorwig Power Station in North Wales.

Dinorwig Power Station was opened in 1984 and remains the largest pumped storage power station in Europe. The power station itself is located inside a mountain with lakes above and below it. It is used to provide almost instant power for the National Grid at times when demand suddenly increases or there is a loss of power from other stations. At such times the gates holding back the water in the top lake are opened and the water passes through the 6 generating turbines housed in the mountain and then on into the bottom lake.

The generating turbines are located in an enormous cavern within the mountain and are serviced by a 16km network of tunnels. As part of an ongoing programme to maintain the stability of the bare bedrock in the tunnels, Stainless UK manufactured 25mm diameter ribbed bars with threaded ends in lengths of up to 6m for use as rock bolts. The duplex stainless steel bars were resin fixed into holes drilled into the rock and then tensioned using a 15mm thick stainless steel end plate.

Grip-Bar - Holding on to History at the Acropolis

Stainless UK has supplied stainless steel Grip-Bar rock anchors to stabilise the upstream rock slope of the Klepsydra Spring House on the north face of the Acropolis in Athens as part of a major restoration project of this world heritage site.

The spring that supplies water to the Klepsydra was first known in Neolithic times with the spring house being built in 460 BC. The Klepsydra was used as a cistern to collect rainwater pouring down the Acropolis slopes. The water flowing down the hill entered through a hole in the middle of the cave and was collected in a central basin. From here the water could be drawn as required.

As part of the stabilisation work, Stainless UK has supplied through geotechnical distributor Elebor, Grade 316 stainless steel 16mm Grip-Bar rock anchors in lengths of up to 6m. The anchors were fixed into the rock using resin capsules. Stainless steel end plates for the bars have also been manufactured and supplied for the project.

“Stainless UK is pleased to be associated with the restoration of such a historic structure. It carries on a proud tradition Grip-Bar has built up over the years of being used on projects ranging from the Pyramids to Caernarfon Castle” said Tim Wells, managing director of Stainless UK.

Britannia Bridge

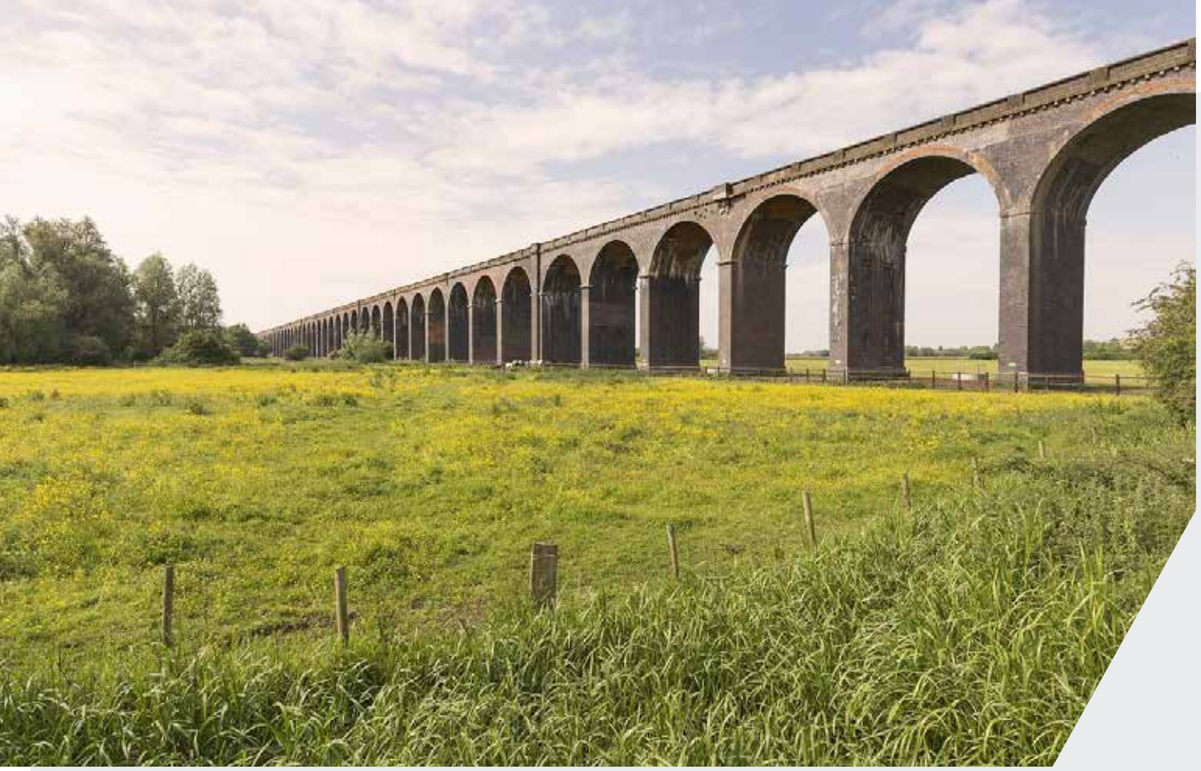
The Britannia Bridge, over the Menai Straits links Anglesey to mainland Wales. Replacing the original 1850 bridge, the current bridge was built in 1970. Grip-bar was used to strengthen the anchor supports as part of remedial works.

Helford River

The village of Helford in Cornwall is situated on the Helford River. Stainless steel hollow Injection Anchors were used to stabilise the loose fill behind a retaining wall on the river bank.

Mussenden Temple

Mussenden Temple is a small circular building situated on the cliffs in County Londonderry. Years of coastal erosion brought the temple closer to the edge. Grip-Bar was used to stabilise the cliff face below the temple.



Stainless UK's Ten Year Involvement with Historic Viaduct Repairs

Harringworth Viaduct is the longest masonry viaduct in the UK. Opened in 1878, the viaduct is 1,275 yards long and consists of 82 arches each 60' high with a span of 40'.

The Grade 2 listed viaduct carries the Oakham to Kettering line over the River Welland in Northamptonshire. Built from bricks which were manufactured on site, the viaduct has suffered from extensive weathering over its 140 year history.

For more than a decade Network Rail have been undertaking a programme of repair works. Initially work was carried out on the most seriously damaged areas of the viaduct, now contractor AMCO are working to complete all necessary repairs to the historic structure.

Stainless UK has been supplying products for use in repair and renovation work on the Harringworth Viaduct for the past 10 years. Initially stainless steel Grip-Bar tie bars and pattress plates were used to secure the structure. Now, in order to control vertical cracking in the brickwork 6mm stainless steel ribbed bars are being used as stitch bars in the structure. To control the horizontal cracking, 20mm stainless steel ribbed bars are being grouted into brickwork.

Grip-Bar Anchors Used to Help Protect Cornish Archaeological Site

Stainless UK have supplied over 100 stainless steel Grip-Bar rock anchors and ground anchors to local contractor Aquasource (SW) Ltd for installation as part of the works to repair and protect the cliff path at Trevelgue Head in Cornwall.

The Trevelgue Headland, near Newquay is the site of an Iron Age promontory fort built to defend a 700m long headland and the natural St Columb Porth harbour. The English Heritage site contains eight significant earth and stone ramparts, two large Bronze Age barrows and the foundations of a number of round houses. With a history dating back 8000 years, the site is one of Cornwall's best ancient monuments. Erosion caused by recent winter storms combined with increasing visitor numbers has meant that repairs are now needed to the coastal path that runs through the site.

Stainless UK have supplied 24mm Grip-Bar in 1m lengths for use as rock anchors drilled vertically into the rock at the base of the new gabion wall being constructed to support the face of the cliff. 33mm Grip-Bar in 4m lengths was used to form ground anchors drilled horizontally into the rock face. Each anchor assembly consisted if the Grip-Bar anchors, end plate and fixings. All the anchors were manufactured from marine grade 316 stainless steel.

Stainless UK – A Stronger Hold on Industrial Heritage

For more than a hundred years, the Blaenavon Ironworks, built in the late 1780's, operated the second largest furnace in Wales. After its decline in the 1880's, the works was abandoned but has now been refurbished as a World Heritage Site.

An important site in the industrial heritage of Wales it has been preserved for future generations with some innovative refurbishment techniques using products made by Stainless UK.

Throughout the site, contractors Cintec International have carried out various types of pinning, stitching and nailing work to stabilise masonry and the surrounding ground.

Strengthening a large retaining wall adjacent to the blast furnace was the most potentially difficult operation. It involved the use of rope access crews to install 7 meter long stainless steel hollow injection anchors made by Stainless UK. The load was spread through the walls by large pattress plates fabricated by Stainless UK to match the original adjoining plates.

By using hollow injection anchors specifically designed for applications of this type it was possible to drill and grout masonry in a single operation. Normally, this would involved a time consuming four stage process of coring out holes, installing anchors, grouting and extracting tubes.

Designed with ISO rope threads and sacrificial drill bits, hollow stainless steel injection anchors will fit standard drilling rigs without the need for special adaptors. They are manufactured in Grade 316 stainless steel.

Beaumaris Pier Restored to Former Glory

Stainless UK has supplied stainless steel plates and fixings designed to strengthen the timber piles supporting Beaumaris Pier. The plates were installed by contractor BAM Nuttall as part of Anglesey's Coastal Environment Project aimed at improving the island's coastline.

Beaumaris Pier was designed by Frederick Foster and opened in 1846. Over the years the pier has been extended and reached its heyday in the first half of the 20th century when it was a docking point for the Liverpool and North Wales Steamship Co. In recent years the condition of the pier deteriorated and restoration work was urgently required.

"As specialists in stainless steel materials and fabrications many of our products are used in the restoration of piers, jetties and other historic coastal structures where corrosion resistance is essential. Sometimes they provide interesting challenges, but with our background of experience, we can generally come up with a cost effective solution", said Tim Wells, managing director of Stainless UK.

Stainless UK manufactured the marine grade 316 stainless steel plates in their Sheffield factory. These were fixed to the piers legs using stainless steel threaded bars and nuts. The work has restored the structural integrity of the pier and maintained the historic structure as a focal point in the town.

Ancient Castle Defies Time and Gravity – Thanks to Stainless UK

The ancient royal castle at Sheriff Hutton in North Yorkshire is a spectacular ruin which looks like it is performing a breathtaking balancing act. Only four corners still stand and the badly decayed North East tower appears to be defying gravity.

But now, thanks to painstaking restoration work and specialist high tensile stainless steel reinforcing bars from Sheffield company Stainless UK, its future is looking a lot more secure.

The 14th century castle, ten miles north east of York, was once owned by King Richard III. Over the centuries it has been ravaged by the weather and robbed of its masonry material.

Repairs to the formidable 100 foot high North East Tower, which is the worst affected section of the castle were part of an English Heritage funded project.

The work involved supporting the whole tower with scaffolding and pinning it together with stainless steel reinforcing bars. The lower levels needed to be stabilised using four 8-meter long M64 tie bars across the arches. These were supplied in Grade 316 stainless steel.

The ties were inserted into holes drilled through the walls and anchored approximately 400mm deep into the one meter thick wall. Central couplers and end threads over 800mm long were used to ensure the bars fitted accurately into the arch.

Hollow Injection Anchors and Grip-Bar Anchors Used for Hotels New Seafront Retaining Wall

The Carbis Bay Hotel near St Ives in Cornwall was designed and built by the area's best known architect, Sylvanus Trevail in 1894.

It has since grown and developed into one of the country's leading luxury hotel and resorts. Further expansion was planned in the form of 8 three storey beach front apartments and a new wedding and conference complex.

To allow construction of the new buildings required extensive stabilisation works to the cliff face below the hotel. This took the form of a new concrete retaining wall at the top of the beach and an area of adjacent embankment stabilisation.

Stainless UK supplied Grade 316 hollow R25 Injection Anchors complete with 20mm thick end plates for use as rock anchors on the 108m long x 18m high retaining wall. The wall, the longest in South West England, required 160 anchors in total to help tie it to the cliff face.

At the western end of the new wall, slope stabilisation work was carried out using 24mm Grip-Bar and R25 Injection Anchors complete with 15mm and 20mm thick end plates in Grade 316 stainless steel as soil nails and rock bolts to support the retaining mesh and sprayed concrete.

Grip-Bar Used to Stabilise Rail Tunnel Lining

With its high strength and resistance to corrosion, Grip-Bar stainless steel threaded bar manufactured by Stainless UK has been used in a wide range of tunnel refurbishment projects.

Typical of this is Conisborough Railway tunnel in South Yorkshire where Grip-Bar was used by main contractor AMCO. The scheme involved drilling and dowelling through the brickwork lining in two locations, one area 46 meters long and another 8 meters long in the 200 meter tunnel.

Work was carried out to stabilise the rock face behind the lining and then remove the secondary lining before supporting the original primary lining with Grip-Bar rock anchors.

As the line is in regular use, the work was carried out during restricted periods at weekends. With this time scale it was essential that everything performed reliably and therefore Grip-Bar was chosen because it offered trouble free installation. Due to the considerable depth of unstable material in the tunnel, 24mm Grip-Bars in lengths of up to 12.5 meters were used on the project.

Grip-Bar can be cut at any point without the problem of re-threading. This is because Grip-Bar has a very coarse thread which does not become blocked and allows Grip-Bar fixings to move freely. In railway tunnelling work where set up costs for refurbishment work are high, customers are looking for the type of long term effective solutions which Grip-Bar can provide.

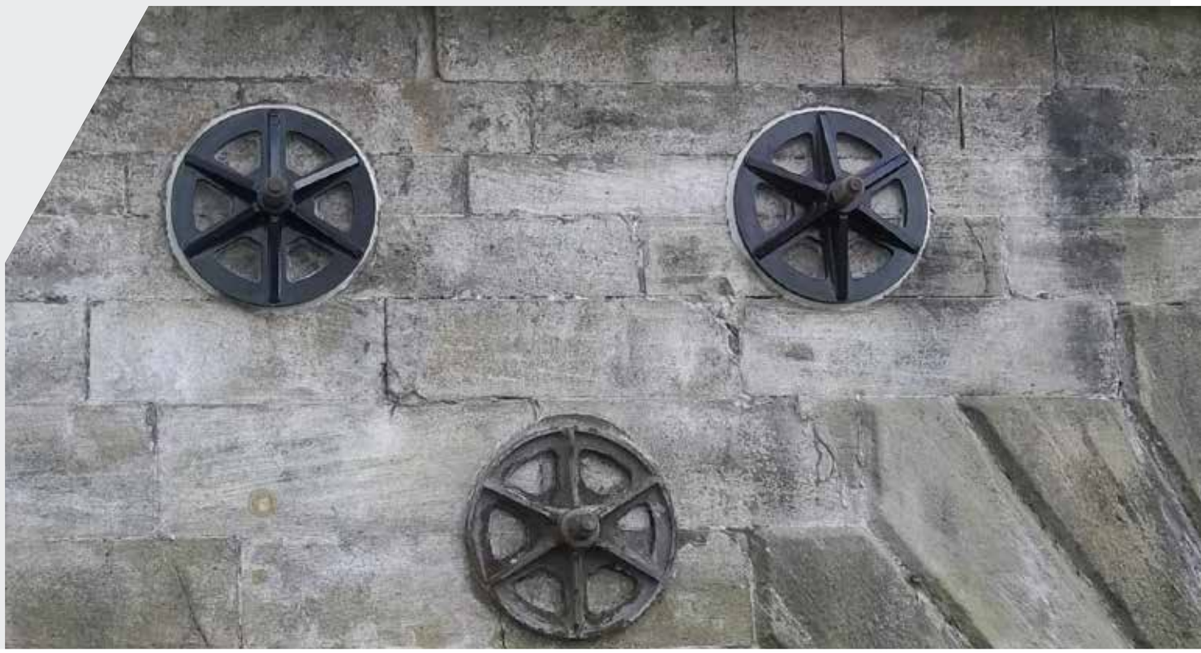
Grip-Bar Takes the Strain on Historic Viaducts

Stainless UK have supplied their stainless steel Grip-Bar fully threaded high tensile tie bar system to contractor AMCO for refurbishment work on two historic viaducts as part of Network Rail's Building and Civils Framework Contract.

Skelton Viaduct in North Yorkshire, designed by T.E. Harrison, was opened in 1872 by the North East Railway Company. Grip-Bar 30mm diameter stainless bars were installed to form 10m long tie bars to strengthen the viaducts masonry construction. Stainless UK also manufactured 750mm diameter 'wagon wheel' design pattress plates to match the original cast iron plates installed in the last century. These bespoke plates were manufactured using the company's high definition plasma cutter at their Sheffield factory.

Frodingham Viaduct near Scunthorpe, was opened in 1866 as part of the Trent, Ancholm and Grimsby Railway. To stabilise the viaduct's structure the contractor used 8.9m long stainless steel 30mm diameter Grip-Bar high tensile tie bars. Stainless UK also supplied a combination of traditional ductile iron pattress plates and custom made fabricated support channels to act as restraints on the masonry.

"Grip-Bar is widely specified for bridge strengthening projects on railways and roads where corrosion resistance is essential. In the case of historic structures, our in-house manufacturing facilities enable us to produce pattress plates which are in-keeping with the designs of the period", said Tim Wells, managing director of Stainless UK Ltd.



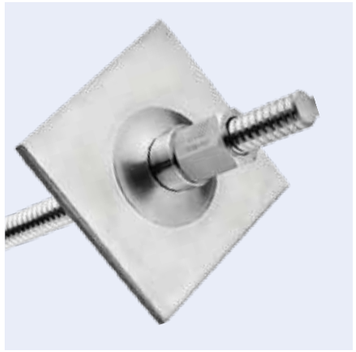
ENGINEERED
FOR EXCELLENCE

A range of our products

Grip-Bar

Grip-Bar® is a unique high bond, high strength stainless steel fully threaded bar used for Rock Anchors, Soil Nails, Masonry and Concrete Fixing. It is manufactured by thread rolling high tensile round bar to give a minimum Proof Strength of 650 N/mm² and minimum Ultimate Tensile Strength of 750 N/mm².

It's coarse pitch thread is robust, self cleaning, user friendly and easy to use on construction sites.



Rebar

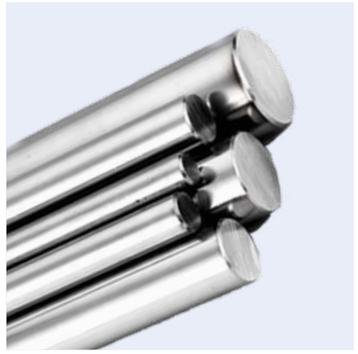
Stainless UK are CARES approved for processing stainless steel reinforcing bars and hold large stocks of stainless steel rebar manufactured to BS 6744. Standard stainless steel reinforcing bar (rebar) diameters range from 6mm to 40mm and is available in grades 304 and 316.

Bars can be supplied cut to any length and are available bent according to the shape codes given in BS 8666.

Dowel Bar

Stainless steel dowel bar is a plain smooth round bar. It can be cast or drilled into concrete and used to transfer loads across joints in concrete. In applications where movement is expected, the dowel bar is cast in one side and de-bonded in the other side of the joint.

Standard stainless steel dowel bar diameters range from 6mm to 50mm in grades 304 and 316.



Pattress Plates

Pattress plates are designed to provide low bearing stress on masonry structures. A full range of pattress plates designed to meet a wide range of requirements are available. Traditional ductile iron pattress plates are suitable for 16 to 39 mm bars with either a Standard 8° rotation or Self aligning for up to 45° misalignment.

Stainless UK manufacture stainless steel pattress plates to order.

Injection Anchors

Stainless steel Injection Anchors provide the optimum combination of strength, bond and corrosion resistance suitable for any rock bolt or ground anchor application.

The ISO standard rope thread, which is continuous along the length of the bar, permits site cutting of the bar without the need for special tools or dressing procedures, whilst also fitting the majority of rock drilling machines.

Threaded Rod

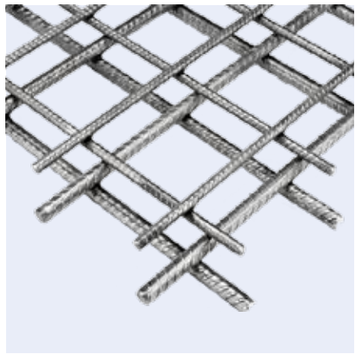
Stainless UK produce standard threaded bars using the thread rolling process. This ensures a smooth form and enhances tensile strength. All threaded rod is manufactured according to BS 3506 in material grades A2 (304) and A4 (316) and material strength classes 70 and 80. A full range of sizes from M10 to M52 according to BS 3643 available.

Partially threaded ends are available to order.

Mesh

Stainless UK offer a wide range of stainless steel reinforcement mesh panels manufactured from ribbed reinforcement bar and also standard welded mesh panels manufactured from plain round bars.

Reinforcement mesh is manufactured using ribbed bars to BS 6744 in mesh patterns given in BS 4483. It is typically used where the concrete cover to the steel is minimal or where a long life cycle is required.



Tying Wire

Stainless steel tying wire should always be used for fixing stainless steel rebar and stainless steel reinforcement mesh. The 1.2mm Stainless steel tying wire is soft and easily bent and twisted.

The use of stainless steel tying wire provides long term protection against corrosion and also prevents rust staining on the concrete surface should the wire encroach into the concrete cover.

Fabrications

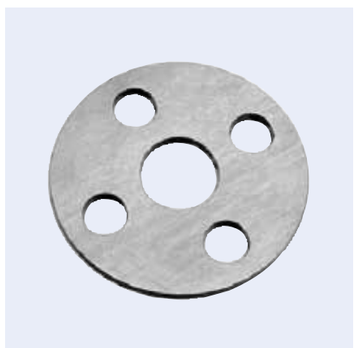
Stainless UK offers their customers a unique bespoke fabrication service. With extensive in-house production facilities and large stocks Stainless UK are able to meet the varied demands of construction projects.

Stainless UK are a CE certified fabricator to Execution Class 2 for fabricated products manufactured in accordance with BS EN 1090-2 Load Bearing and Structural Steel Components.

Profile Cutting

Stainless UK have high definition plasma and laser cutting capabilities and are able to cut stainless steel plates up to 6m x 2m and with thicknesses from 2mm to 50mm. Using the latest computer technology, CAD drawings can be quickly used to produce a wide range of precision profiles from Stainless UK's own stock.

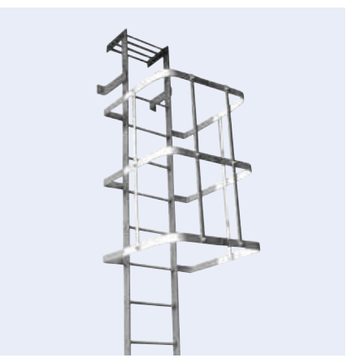
Stainless UK profile cutting is the ideal solution for finished products or blanks cut to precise sizes reducing the need for further machining.



Ladders & Hand Railing

Stainless UK manufactures stainless steel ladders for industrial applications normally in accordance with the recommendations given in BS 5395 or relevant Water Authority guidelines. All ladders are made to order and can incorporate safety hoops, in-fills, retractable handrails, grab rails and rest platforms.

Solid bar handrails are also manufactured using 32mm posts and 25mm rails. Flanged ends are provided for bolting into bases and walls.



Nuts & Couplers

Stainless UK can supply a full range of stainless steel nuts and couplers for use with their threaded products. Metric fixings to BS 3506 are available in material grades A2 (304) and A4 (316) and material strength classes 70 and 80.

A full range of Grip-Bar load nuts, lock nuts and couplers designed to provide a strength equal to the theoretical minimum required by the threaded bar are available.

Stainless UK
Newhall Road Works,
Newhall Road, Sheffield, S9 2QL

T: 0114 244 1333
F: 0114 244 1333
E: sales@stainless-uk.co.uk

www.stainless-uk.co.uk

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