

Contents

- World Leader
- SSCS Frond Systems
- Frond Matts
- SSCS Anchors
- Frond Systems Applications
- Key Benefits of the SSCS Frond Systems:
- Engineering Consultancy and Design Services
- Approvals and Certifications
- Testimonials
- Major Clients



World Leader

Seabed Scour Control Systems Limited (SSCS) is a world leader in the design and manufacture of specialised scour protection systems for the protection and stabilisation of subsea installations.

Worldwide Reputation

SSCS has worked with major oil and gas development and operating companies, power generation companies and subsea installation contractors worldwide who are themselves world leaders. As such they demand the best.

SSCS has repeatedly met that demand in Africa, the USA, the Far East, Australasia, India, China and Vietnam.

The Industry Requirement

When the conditions that create scour exist the resulting scour can impact on subsea installations and can become severe and impose unacceptable operating and environmental conditions.

The industry requirement is for immediate and permanent solutions. SSCS meets that requirement.

The SSCS Working Practice

The SSCS frond systems are designed, engineered and manufactured to endure the most severe environments.

SSCS operates to BS EN ISO 9001:2000 and in doing so recognises that quality is not only a function of professional design, engineering integrity and sound working practices, but also of cost effective solutions delivered on time.

SSCS takes responsibility for its work at every stage, through to delivery and post installation.

SSCS Frond Systems

In 1984 SSCS developed a method of harnessing the natural effects that create scour to produce a permanent, maintenance free Scour Protection System.

SSCS has since provided field proven scour protection solutions to meet the requirements of the most demanding operational and environmental subsea conditions worldwide.

Products:

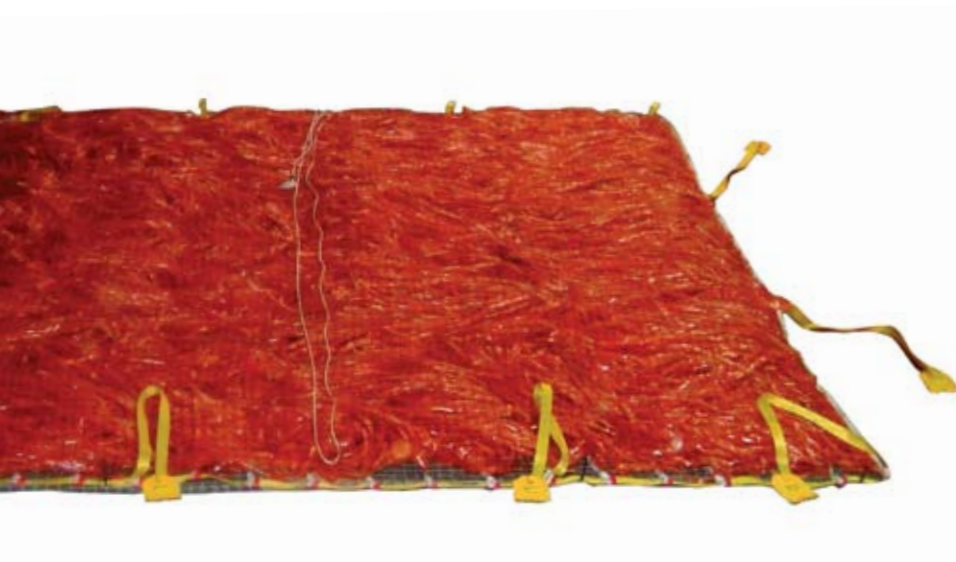
- Frond Scour Protection Mats
- Seabed Anchors
- Frond Scour Protection for Moulded Protection Structures
- Frond Scour Protection for Fabric Formworks
- Pipeline and Cable Scour Protection Systems
- Fronded Concrete Mattresses

SSCS Frond Mats

The Frond Mats are fully flexible and are rolled around a centre spool for ease of transportation and diver installation.

They are manufactured in three Standard Sizes each incorporating 1.25m length fronds and pre-attached Anchors.

- Type 12:** 2.5m x 5.0m c/w 8 Anchors
- Type 25:** 5.0m x 5.0m c/w 16 Anchors
- Type 30:** 5.0m x 7.5m c/w 24 Anchors



Initial sediment deposition at the foot of the fronds



Sediment deposition at 10+ days



Sediment bank near full development at 20+ days

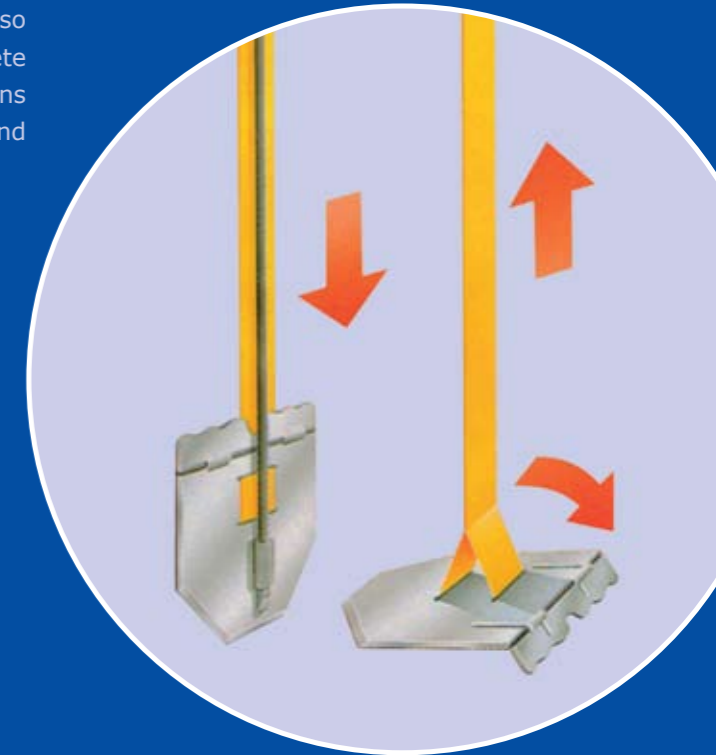


Fully developed sediment bank at 30+ days

SSCS Anchors

These are pre-attached to the SSCS Frond Mats and are also used independently to provide additional retention for Concrete Mattresses and to secure and stabilise subsea installations such as protection housings, data recorders, power and telecommunications cables and umbilicals.

The anchors have a Lloyds and ABS certified retention of one tonne.



SSCS Frond Systems Applications

The SSCS Frond Scour Protection Systems are used to protect subsea installations including:

- Pipelines & Pipeline Crossings
- Platform Substructures
- Jack-up Drill Rigs
- Subsea Structures
- Wind Turbine and Meteorological Mast Foundations
- Wave and Tidal Power Generator Foundations
- Telecommunications and Power Cables & Cable Crossings
- Umbilicals
- Coastal Structures and Out-Falls

Key Benefits of the SSCS Frond Systems:

- Stops scour immediately upon installation
- Provides a permanent, self maintaining solution to scour
- Provides dropped object and impact protection
- Can be installed with relative ease and speed
- Has low installed costs
- Provides a one installation/one cost solution
- Are environmentally accepted
- Can be supplied in standard sizes or specially designed for particular geometrical layouts

Engineering Consultancy and Design Services

SSCS provides these for both the scour protection of new installations and the rectification of scour at existing facilities.

Existing facilities.

SSCS:

- assesses the impact of any scour detected during maintenance and inspection surveys
- advises on the necessity for remedial works
- recommends methods for the rectification of existing scour and the elimination of further scour
- designs site specific scour protection systems

New installations

SSCS:

- determines, by the analysis of site data in advance of installation, a site's susceptibility to scour
- recommends effective methods for achieving the necessary scour protection and provides protection system specifications

Approvals and Certifications

The SSCS Frond Systems are approved by:

- DEFRA (Department for Environment Food and Rural Affairs)
- CEFAS (Centre for Environment, Fisheries and Aquaculture Science)
- British National Federation of Fisherman's Organisations
- US Army Corps of Engineers, USA
- Institute of Hydro-Engineering, Polish Academy of Sciences
- Hydraulic Engineering Division, Rijkswaterstaat, Netherlands

and Certified by:

- DNV (Det Norske Veritas) for Offshore Renewable Installations
- Lloyds Register Quality Assurance to ISO 9001:2000 for Design & Manufacture

Testimonials

"we will continue to recommend your Systems for any future developments such as the Offshore Wind Farm developments, the next generation of offshore energy projects, and for any civil and oil and gas industry installations on which we are consulted."

Fleetwood Fish Producers Organisation

"we would have no hesitation in commending it to any interested parties in the Shell Group of Companies or to any of your prospective Clients."

"are very appreciative of the success of its development in our operations." **Shell**

"engineers came up with a novel solution to stop tides and strong currents damaging a vital underwater gas pipeline off North Wales - plastic seaweed!"

"the prize for ingenuity goes to the plastic seaweed, pioneered by Seabed Scour Control Systems, which has been used to help anchor the pipe to the seabed." **Transco**

Major Clients

Amoco

Arco British

BP

BP Vietnam

BP Indonesia

British Aerospace

British Gas

British Marine Technology

British Telecoms

Burlington Resources

Cabot

Cairn Energy India

China National Offshore Oil Company

Conoco

Elf Petroleum

Exxon

GE Power Systems

Hamilton Brothers

Irving Oil

Lasmo

Maersk Oil & Gas

Marathon

Ministry of Defence (U. K.)

Mobil

NAM

Norsea Com A/S

Odeco

Pennzoil

Perenco

Phillips Petroleum

Premier Oil

Ranger Oil

Sable Energy

Shell Brunei

Shell Exploration UK

Sinopec

Transco

Woodside Energy



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