

RetroSled™

General

RetroSled is a retrofit sacrificial anode system designed for pipelines where anode burial below the natural seabed is required or anticipated. The sled can be rapidly and safely deployed offshore with little-to-no diver intervention.

RetroSled is suited for applications where there is little-or-no seabed movement. For situations where seabed movement is anticipated, Deepwater recommends the RetroMat (See RetroMat technical datasheet).

Frame (Item 2)

Steel grade ASTM A53 [ASTM A106]
ASTM A36 [EN 10025 S355]

Welding All welding conducted in accordance with Steel Structural Welding Code – AWS D1./D1.1M:2006 [EEMUA 158]

Lifting (Item 3) 1/2" [12.7 mm] Padeye
4 points

Connection details (Item 4)

RetroSled 2 x Ø 1/2" [M12] Stud welded to frame

Structure RetroClamp (See RetroClamp technical datasheet)
Quantity as per requirements, typically 2 per RetroSled

Cable 4/0 AWG [~107 mm²], EPDM insulated, heavy duty flexible cable
2 per RetroClamp

Overall weights & dimensions*

15 Year

Dimensions 78" x 270" x 10"
(W x H x L) [1980 x 6780 x 270 mm]

Weight (Air) 1980 lb [890 kg]

Weight (Water) 1455 lb [660 kg]

20 Year

Dimensions 78" x 270" x 11"
(W x H x L) [1980 x 6780 x 280 mm]

Weight (Air) 2140 lb [970 kg]

Weight (Water) 1575 lb [715 kg]

Anodes (Item 1)

Description

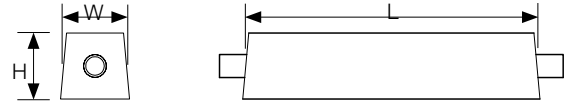
Design life

Net weight

Gross weight

Dimensions (L x W x H)

Core



Deepwater offers two standard dimensions of anode for the RetroSled. The anode size is selected based on design life.

15 Year

285 lb [129 kg]

370 lb [167 kg]

120" x 5.3" x 5.5"
[3050 x 135 x 140 mm]

2" Sch 80 Pipe

20 Year

325 lb [148 kg]

410 lb [186 kg]

120" x 5.5" x 5.9"
[3050 x 140 x 150 mm]

2" Sch 80 Pipe

Anode composition / electrical properties

Description

RetroSled is available with two anode compositions. Deep10 alloy was designed as an effective, general-purpose offshore alloy for use in tropical water environments. Deep7 alloy, with low iron content, is more effective in cold, deep water.

Composition (%)

Iron (Fe)

0.07 max.

Deep10

0.10 max.

Silicon (Si)

0.10 max.

0.10 max.

Copper (Cu)

0.003 max.

0.006 max.

Zinc (Zn)

4.75 - 5.25

4.75 - 5.75

Indium (In)

0.015 - 0.025

0.010 - 0.020

Titanium (Ti)

0.025 max.

0.025 max.

Others (each)

0.02 max.

0.02 max.

Aluminium (Al)

Remainder

Remainder

Open circuit potential (sw)

(-) 1.08 V vs Ag/AgCl

(-) 1.08 V vs Ag/AgCl

Closed circuit potential (sw)

(-) 1.05 V vs Ag/AgCl

(-) 1.05 V vs Ag/AgCl

Seawater capacity @ 25°C

1100 AHr/lb [2420 AHr/kg]

1100 AHr/lb [2420 AHr/kg]

Seawater capacity @ 5°C

1100 AHr/lb [2420 AHr/kg]

Variable

