Dear Sir/Madam,

Harbinger aluminium access equipment, initially marketed under the name Harbinger BV, is now used as the brand name for the range of high quality seawater resistant aluminium gangways, accommodation ladders and other types of access equipment.

Besides the standard range of gangways and accommodation ladders we manufacture tailor-made access equipment.

Either according to the requirements of the specification or to fit a (still existing) stowing system in the case of the replacement of a ladder that appears to be damaged beyond repair.

In such cases we manufacture on the basis of the drawings of the ladder system that was originally supplied or do the necessary survey on board and take all measurements required to manufacture a replica that can be installed quickly and easily on the vessel’s next call.

Another aspect of our services is the design and manufacture of complete accommodation ladder systems including self stowing gear, winches and control systems.

The range of Coaster gangways complies with the Dutch rules and regulations for access equipment.

The other types of gangways comply with the international rules and regulations specified in BSMA 78 and ISO 7061.

The accommodation ladders comply with BSMA 89 and ISO 5488.

If required a works certificate can be supplied or a certificate based on a load test witnessed by a representative of the classification bureau.

Most types and lengths of gangways are readily available from stock in the Rotterdam warehouse. If required we arrange fast road-transport to the vessel or port of call within Europe.

In case you would like to receive more copies of this catalogue please inform us and we will immediately mail them to you.

Thank you for your attention and looking forward hearing from you should you need a seawater resistant gangway or accommodation ladder that you will find described in detail on the following pages of this brochure.

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E mail: sales.mme@mme-group.com
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COASTER GANGWAY

Description:

The HARBINGER Coaster gangway or Dutch gangway as it is often called, is a lightweight construction in seawater resistant aluminium. They are easy to handle which make them popular with many crews on board ships that use a gangway in length varying from 3.0 - 7.5 metres, and where the maximum load capacity of 3 x 75 kg at the same time is not an obstacle.

It consists of stringers of light alloy channel section with light alloy crossmembers at suitable spacing, to which is secured light alloy corrugated section flooring. The gangway is supplied complete with:

- aluminium foot grips at 350 mm spacing,
- a quay roller at shore end,
- bulwark hooks at ship end,
- ropes,
- aluminium stanchions in self-locking sockets on both sides

Coaster gangways are available in lengths up to 7.5 metre.

Finish:

Aluminium self colour and degreased.

Load capacity:

3 x 75 kg at one time maximum.

Coaster gangways are designed, manufactured and inspected in accordance with the requirements of the Dutch Stevedores Act.
SALA GANGWAY

Description:

The HARBINGER Sala (Steep Angle) gangways are manufactured from seawater resistant aluminium, which make them light and robust at the same time.

The Sala design is to accommodate steep angles of access (to suit angles up to 50 degrees).

They are manufactured of stringers of light alloy angle girder with cross members at suitable spacing, to which a light alloy 5-bar pattern slip resistant deck plate is secured.

They are supplied complete with:

- aluminium steep angle treads at 366 mm spacing,
- bulwark hooks at ship end,
- a quay roller at shore end,
- hand ropes & half-height manropes,
- aluminium tubular portable self-locking stanchions mounted in sockets at 2 sides

Sala gangways are available in lengths up to 10 metre.

Finish:

Aluminium self colour and degreased.

Load capacity:

400 kg/m² maximum.

Sala gangways are designed, manufactured and inspected in accordance with the requirements as set down in the international standard ISO 7061 and BSMA 78.
SHALA GANGWAY

Description:

The HARBINGER Shala (Shallow Angle) gangways are manufactured from seawater resistant aluminium, which make them light and robust at the same time.

The Shala design is to accommodate angles of access up to 30 degrees. They are manufactured of stringers of light alloy angle girder with crossmembers at suitable spacing, to which a light alloy 5-bar pattern slip resistant deck plate is secured.

The gangway is supplied complete with:

- aluminium foot-grips at 360 mm spacing,
- a quay roller at shore end,
- bulwark hooks at ship end,
- hand-ropes and half-height man ropes,
- aluminium tubular portable self-locking stanchions mounted in sockets at 2 sides.

Shala gangways are available in lengths up to 10 metre.

Finish:

Aluminium self colour and degreased.

Load capacity:

400 kg/m² maximum.

Shala gangways are designed, manufactured and inspected in accordance with the requirements as set down in the international standard ISO 7061 and BSMA 78.
SHORE GANGWAY

Description:

The HARBINGER Shore gangways are manufactured from seawater resistant aluminium, which reduces the weight in comparison with the conventional gangways in steel.

The design of the Shore gangway uses cross members at suitable spacing to achieve optimum strength.

The Shore gangway is manufactured as a riveted construction. This allows repairs to be carried out in those areas of the world where aluminium welding is not easily available. The gangway consists of stringers of light alloy angle girder with crossmembers at suitable spacing, to which a light alloy corrugated section flooring is secured.

The Shore gangway is supplied complete with:

- aluminium foot grips at 350 mm spacing,
- a quay roller at shore end,
- bulwark hooks at ship end,
- hand ropes & half-height man-ropes,
- aluminium tubular portable self-locking socket stanchions on both sides,
- foot-grips either for use at angles of up to 30 degrees or up to 50 degrees.

Shore gangways are available in lengths up to 30 metre.

Finish:

Aluminium: self colour and degreased

Load capacity:

400 kg/m² maximum.

Shore gangways are designed, manufactured and inspected in accordance with the requirements as set down in the international standard ISO 7061 and BSMA 78.
ACCOMMODATION LADDER

Description:

The HARBINGER seawater resistant aluminium Accommodation ladder consists of solid stringers of own design fitted with wire guides to take wire from the winch. The ladder will be fitted with fixed curved steps giving a safe walking surface through angles of inclination ranging from 20 to 55 degrees. The ladder will be equipped with a turntable topplafform, adjustable lower platform, quay roller, shipside wheel, hardwood chafing pads, hangers and hand ropes & half-height manropes through aluminium tubular portable self-locking socket stanchions on both sides. Accommodation ladders with a length varying from 13 mtr up to 17.5 mtr will be delivered in two sections with one rigid joint (unless otherwise requested) in order to facilitate economical transport. Ladders with a length > 17.5 mtr will be supplied in three sections with two rigid joints.

Accommodation ladders are available in lengths up to 30 metre.

Finish:

Aluminium self colour and degreased
Steelwork shotblasted to SA 2.5 and zinc sprayed.

Load capacity:

75 kg per tread maximum

Accommodation ladders are designed, manufactured and inspected in accordance with the requirements as set down in the international standard ISO 5488 and BSMA 89.
PAINTING RAFT/ WORKING RAFT

Description:

The HARBINGER Painting / Working raft consists of two longitudinal floaters constructed from aluminium sheeting assembled by means of aluminium pop rivets. The floaters are filled with expanded polystyrene, which will prevent the raft from sinking should penetration occur. The bottom of the floaters is strengthened with longitudinal timber keel bars, which will provide protection at shallow water level and during storage. The floating tanks are connected by stainless steel bolts to a welded aluminium framework of angle bar, which also functions as the support / carrying structure of the wooden work deck. The work deck consists of soft wood plank which are bolted to the framework by means of bolts and nuts. The work deck is further equipped with four galvanised steel mooring cleats, rowlock for sculling, ash oar, two aluminium end ladders which fit into the sockets, a wooden staging plank and guard ropes.

Dimensions:

Overall dimensions : 2500 x 2540 x 685 mm
Storage dimensions : 2500 x 1450 x 1000 mm
Weight : 100 kg

Finish:

Aluminium: self colour and degreased

Load capacity:

Two men plus 50 kg equipment max.
BULWARK LADDER

Description:

The HARBERINGER seawater resistant aluminium Bulwark ladder consists of stringers of light alloy channel section. The bulwark ladder is equipped with four aluminium non-clip plate treads, two adjustable feet with hardwood pads, bulwark hooks and aluminium tubular portable self-locking socket stanchions on both sides.

Dimensions:

Bulwark ladder height : 1000 / 1100 mm
Bulwark ladder width : 950 mm
Weight : 12 kg

Finish:

Aluminium: self colour and degreased
SPECIAL BULWARK LADDER (SIS 7)

Description:

The seawater resistant aluminium Bulwark ladder consists of stringers of light alloy channel section. The bulwark ladder is equipped with four aluminium non-clip plate treads, two adjustable feet with hardwood pads, bulwark hooks and aluminium tubular portable handrails on both sides.

Finish:

Aluminium: self colour and degreased

Dimensions:

Bulwark ladder height : 1000 / 11200 mm
Bulwark ladder width : 850 mm
Weight : 27 kg
MIDSHIP PILOT LADDER SYSTEM

Description:

The HARBINGER seawater resistant aluminium Midship Pilot ladder consists of stringers of light alloy angle girder type construction with light alloy crossmembers at suitable spacing, to which is secured light alloy corrugated section flooring. This system consists of:

- top-platform,
- rigid lower platform,
- center transport wheels,
- rigid bridle yoke,
- aluminium tubular portable self-locking socket stanchions on both sides,
- two portable davit posts + arms and a suspension tackle,
- hand ropes & half-height manropes.

Dimensions:

Midship Pilot ladders are available in lengths up to 10 metre.

Finish:

Aluminium: self colour and degreased
Steelwork: shotblasted to SA 2.5 and zinc sprayed

Load capacity: 3 x 75 kg at one time maximum.
WINCHES

For the accommodation ladders and pilot ladders split drum worm gear winches are available. These winches are available with an electrical or an air drive. A hydraulic drive or a hand winch are available on special request. The standard worm gear winches are self braking and adequate for general hoisting purposes. However when accurate positioning is required, a brake motor may be advisable.

The choice for the right winch drive depends on the available power source, the working environment and required line pull. As an option the winches can be equipped with remote controls, drum guards, grooved drum, double drum / single drum and disengager.

Stationary applications can often obtain power from the main grid. On ships the electric power sources become more and more powerful. In both cases an electrical drive would be the right choice.

In hazardous environments, where explosions might occur, for example during exploitation of natural sources, mining on and off-shore oil and gas, air drives are the right choice.

Advantages and disadvantages.
Electric drives are clean, world wide obtainable, maintenance free, have good speed control possibilities and a high pull out torque. However brake motors > 30 kW become expensive.

Air motors are clean, remain impact resistant and protected from shock lading, even when exposed to extreme temperatures. The use of reliable spark resistance Vane motors and inherently self-locking worm gear transmissions guarantee a trouble free use and low maintenance.

Air drives however are expensive, have a low pull out torque and limited power.

Controls
Each winch needs a control to be operated. However if ladder systems are required on both shipsides a combined controlbox can be used to reduce costs. The way to control the winch depends on its task; is it a stand alone winch or is it part of a complete automated process. The controls can vary from basic to a completely computerized control system.
- 50 x 50 Hardwood/aluminium footgrips.

- Stanchion sockets

- ø16 Polypropylene Harkrope

- ø16 Polypropylene Marrope

- ø100 Aluminium alloy roller.

- Lashing eye

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<th>Weight (kg)</th>
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<td>110</td>
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</tbody>
</table>

Load capacity: 3 x 75 kg, at one time max

---

TYPE: COASTER GANGWAY

HARBINGER PRODUCTS
**Description:**

SALA Gangway

**Date:**

**Approved:**

---

**Diagram:**

- **Dimensions:**
  - Length: 680 mm
  - Width: 782 mm
- **Components:**
  - Steel Channel sockets
  - Polypropylene Handraps
  - Polypropylene Harnrops
  - Lashing eyes
  - Toolboards 150 mm
  - Lengths available of 3 up to 10 mtrs.
- **Load Capacity:**
  - 400 kg / m²

**Table:**

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<td>200</td>
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**Notes:**

- **Material:**
  - BSMA 78 and ISO 7061
- **Construction:**
  - Welded N5 Flue

**Contact:**

Material Metingen Europe BV

Hendrikstraat 16 PO, Box 2218 2080 GE Middelburg

Tel: +31 (0) 196-442828
Fax: +31 (0) 196-442241

**Sheet:**

- **Size:** A4
- **K.W. / C.M.:** 69x 83
- **Rev:** 0
- **Date:** 01-01-2003

**Products:**

SALA Gangway

HARBINGER PRODUCTS
LENGTHS AVAILABLE OF 3 UP TO 10 METERS.

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<th>Length (mtr)</th>
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LOAD CAPACITY: 400 KG / mDmax

BSMA 78 and ISO 7061.

TYPE: SHALA GANGWAY

HARBINGER PRODUCTS
MATERIAL: ALUMINIUM ALLOY 6082 T6  
WEIGHT: 12 Kg.

TYPE: BULWARK LADDER  
HARBINGER PRODUCTS

MATERIAAL METINGEN EUROPE BV, E-MAIL: sales@mme.nl
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Size: A4  
Name: K.W. / G.M.  
Dwg no: 69T - 93R  
Rev: 0  
Scale: -  
NTS  
Sheet: 01  
Date: 01-01-2003
ARRANGEMENT OF PILOT ACCESS LADDER.

SHIPPING AND UNSHIPPING.
Ladder hoisted by tackle until two blocks are lowered.
Ladder stowed by blocks lowered to lowered position.
Ladder disassembled from upper platform, hoisted above rail and swung inboard one end at a time.

SIDE VIEW.

FRONT VIEW.

LOAD CAPACITY: 3 x 75 Kg at one time maximum.

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OTHER PRODUCTS AND SERVICES

Sacrificial Anodes

One of the specialties of the MME group is corrosion control by means of Cathodic Protection. As steel is the most widely used material for marine structures such as ships, offshore platforms, submerged pipelines, lock gates etc. some form of corrosion protection is necessary in order to ensure a reasonable lifetime for these investments.

The MME anodes are produced in a dedicated 3000 sq. meter large production facility, fully owned by the MME-group. This foundry operates under an ISO 9001 certified Quality Management System. The objectives of this production unit are to produce a quality product at a competitive price and to be flexible enough to manufacture all sorts of specialties demanded by our clients.

Impressed Current Systems (ICCP)

Monitoring and fighting corrosion are part of the core competencies of the MME Group. MME has delivered cathodic protection systems for over 4 decades. During this period our systems have been perfected by re/incorporating gathered field data. Nowadays MME delivers intelligent, fully automated impressed current systems that can protect any type of vessel or offshore installation.

Marine growth prevention system

Marine growth in sea chests, seawater piping systems and heat exchangers is a potential danger. To combat this risk the MME marine growth prevention system was developed. Once installed it provides low maintenance dual protection against most hard and soft foulings and corrosion. The system consists of specially alloyed anodes which are connected electrically to a small digital controlled transformer rectifier.

Maritime Surveys

The Marine Services division of Materiaal Metingen is one of the world leaders in Ultrasonic Thickness Measurements and ‘close up surveys’

As an independent organization in the field of maritime inspections and non-destructive testing, our engineers have performed (special) ‘surveys’ on every type of ship.

Reports can be made to a wide variety of formats including the demands of the major classification societies. Our teams are active not only in shipyards and ports but carry out the inspections also during the sea voyage.
Services

Materiaal Metingen is specialized in performing material inspection and testing, conform all usual international norms, codes and procedures. ISO 9001 certified, EN 45004 and ISO 17024 accredited.

Radiographic Testing (RT)

Radiography is one of the most effective methods of non-destructive testing. Radiographic testing usually requires exposing film to x-rays or gamma-rays that have penetrated a material, processing the exposed film and interpreting the resultant radiograph. MMT has a large variety of X-rays tubes for directional as well as for panoramic exposures from 40 kV till 320 kV. For gamma-rays Iridium 192 and Cobalt 60 sources are available.

Ultrasonic Testing (UT)

Pulses of high-frequency waves are transmitted to the material to be tested. The reflections (echoes) of these pulses are picked up by the receiver. These reflections are presented on a flaw detector screen (CRT). The time taken for the wave to travel through the material is taken from the screen and the position of the flaw or material thickness can be calculated. With help of artificial flaws in calibration blocks the amount of reflected energy is used to estimate the flaw-size.

Magnetic Particle Testing (MT)

This method is used for detection of surface defects in ferromagnetic materials. A magnetic field is applied to the materials. Defects become visible by the attraction of the iron test particles by the magnetic poles created around the defects. A wide range of portable magnetising units with AC/ DC are available as well as some stationary magnetising units at our offices.

Liquid Penetrant Testing (PT)

Inspection method used for detecting surface discontinuities. The tested areas will be covered with a visible or fluorescent oil-based liquid. This method is based on capillarity. The liquid penetrates into the surface breaking defects in ferrous or non-ferrous materials. A developer is used to draw the penetrant out of the defects. The indication, because of diffusion of the penetrant in the developer, is always greater than the discontinuity the ultimate success of the liquid penetrant testing depends on the visibility of indications.