Certificate

kiwa
Partner for progress

Number	K48198/03	Replaces	K48198/02
Issued	2012-02-01	Dated	2009-10-15

Technical Approval with-Product Certificate

GRP sumps for underground fuel storage tanks & GRP manifold chambers and pump dispensers

Based on pre-certification tests as well as periodic inspections by Kiwa, the products referred to in this certificate and marked with the Kiwa-mark as indicated under 'Marking', manufactured by

Fibrelite Composites Ltd.

may be relied upon to comply with the Kiwa Evaluation Guideline BRL-K21006/02 dated 2010-12-15 “PE/GRP sumps for underground fuel storage tanks, manifold chambers and pump dispensers”. The products have been tested for compliance to the media as detailed on page 2 of this certificate.

ing. B. Meekma
Director Certification and Inspection, Kiwa N.V.

This certificate is issued in accordance with the Kiwa-Regulations for Product Certification.

This certificate consists of 4 pages.
Publication of the certificate is allowed.

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GRP sumps for underground fuel storage tanks and GRP manifold chambers and pump dispensers

CONTENTS

Application and use

Sumps for underground fuel storage tanks

Sumps to be mounted on underground tanks complying with this evaluation guideline are suitable to access underground manhole covers or piping systems easily. It is noted that the sump is a closed area without ventilation whereby the safety instructions are required to be observed prior to accessing the chamber. It is the responsibility of the owner to follow the safety instructions that are stipulated by the manufacturer.

The sump to be selected must be suitable for the maximum level of the groundwater as applicable. The sump is intended to keep water out during the lifetime of the tank installation. Where pipe work and/or electrical cables enter through the wall of the sump entry boots must be used to ensure tightness.

A sump can only be mounted on an underground tank when the tank has been equipped with a suitable support for connection or when the sump is provided with a solid bottom prepared to fit to the manway flange. The sump consists of a chamber, corbel, internal cover, skirt, and access cover with frame.

Manifold Chambers

The manifold chamber sump is an entrance chamber on tanks giving access to fittings and piping systems. The sump is capable of containing fuels spilt within the space of the sump during calamities but is not intended to be used for the storage of fuels. The sump can retain its designed shape and function in any stage of its designed working life.

Dispenser sumps

The dispenser sump provides access to equipment, pumps, fittings and piping systems installed under the pump dispensers. The sump is capable of containing fuels spilt within the space of the sumps during calamities but is not intended to be used for the storage of fuels. The sump can retain its designed shape and function in any stage of its designed working life.

Technical specification

Chemical resistance

Sumps for underground fuel storage tanks, manifold chambers and dispenser sumps are suitable for use with the following media:

- Petrol (100% mineral based fuel)
- Diesel (100% mineral based fuel)
- Bio petrol containing up to 15% Ethanol (= up to E15)
- Bio diesel containing up to 15% FAME (= up to B15)

Sumps for underground fuel storage tanks

This following products comply with the BRL-K21006 and have a technical approval:

- S8-3/XXX
- S14/XXX
- S16/XXX

The XXX indicates the type of cover that is used i.e. square, round, rain tight or fluid tight.

The following products are recommended to be used in combination with the sump:

- Chamber base seal – TDS10
- Pipe entry seals – TDS2
- Adhesive sealant for chamber to corbel joint – TDS16
- Self levelling sealant between corbel and skirt – TDS17

The manufacturer shall be able to supply drawings of the sump construction in which the components used are identified.

Manifold Chambers

This following products comply with the BRL-K21006 and have a technical approval:

- S80-3760/SEAL

GRP sumps for underground fuel storage tanks and GRP manifold chambers and pump dispensers

Dispenser sumps

The following products comply with the BRL-K21006 and have a technical approval. These are suitable for dispenser models:

- Gilbraco: Type Advantage, SK, Encore, Legacy, Electroline and Enterprise
- Tatsuno: Sales Maker, Sunny and STM
- Tokheim: Quantum
- Wayne: Ovation, Vista, Global Century and GobalStar

A complete list of the products certified forms an integral part of this certificate and can be made available on request.

Installation

Sumps for underground fuel storage tanks

The fibreglass reinforced plastic (GRP) sumps for underground fuel storage tanks are mounted above the manhole covers on underground tanks. The sumps are part of a construction to enable easy access to the manhole cover and/or underground piping system mounted on the manhole cover of the tank.

For installation the manufacturer's instructions and the requirements as stipulated in BRL-K903 are to be followed. The instructions must be available in the local language. Before starting the installation, the personnel must be instructed and qualified by the manufacturer or the distributor. The manufacturer or distributor shall deliver a certificate of qualification to each person qualified.

The sump shall be fixed to a support on the tank. The tank must be equipped with a support to make mounting of the sump possible. When openings are made in the sump for installing piping or electrical wiring, entry boots must be used to ensure a leak tight construction. The vertical part of the **sump** and the entry boots must be leak tested during installation with a vacuum of 12 kPa. The **corbel** must be tested with a vacuum of 6 kPa.

All parts that may come in contact with the stored product must be chemical resistant against that product. This must be verified by the installer. For all connections the sealants and seals as advised by the manufacturer shall be used.

The sumps must be installed such that they are not subjected to any vertical or horizontal traffic loads. When this is not possible, the frame of the access cover must be part of the pavement or concrete construction above the sump. It is recommended to use a suitable access cover. The access cover must be leak tight in order to prevent any fluid leakage from above into the sump.

Manifold Chambers

For installation of the manifold chambers the manufacturer's instructions are to be followed. The instructions must be available in the local language. Before starting the installation, the personnel must be instructed and qualified by the manufacturer or the distributor. The manufacturer or distributor shall deliver a certificate of qualification to each person qualified.

Dispenser sumps

For installation of the dispenser sumps the manufacturer's instructions are to be followed. The instructions must be available in the local language. Before starting the installation, the personnel must be instructed and qualified by the manufacturer or the distributor. The manufacturer or distributor shall deliver a certificate of qualification to each person qualified.

Certified installers for The Netherlands

The sumps have to be installed by certified installers according to the Kiwa Guideline BRL-K903 "Guideline for installers for installation of atmospheric storage tank- and pipe systems for liquid petroleum products".

Recommendations for the Installer

Check the product at the time of delivery according to the paragraph ''Technical specification" to ensure that:

1. the producer has delivered in accordance with the agreement;
2. the mark and the marking method are correct;
3. the products show no visible defects as a result of transport etc.

Check whether the products meet the specifications according to section general, pipes and fittings of the paragraph "Technical specification"

If you should reject a product on the basis of the above, please contact:

- Manufacturer or local supplier and, if necessary,
- Kiwa Nederland B.V.

It is recommended by the manufacturer to use suitable entry boots and access covers.

Entry boots

Entry boots are meant to accommodate a watertight passage of pipes and/or electrical cables through the sump or chamber wall.

Entry boots consist of a housing that seals to the sump or chamber wall and a flexible part that seals to the pipe.

The housing consists of 2 parts, of which at least one is provided with a gasket-like seal. The 2 parts are bolted to each other and are thus fixed to and holding the chamber wall. The material of the housing must be suitable for underground sub-groundwater level installation.

GRP sumps for underground fuel storage tanks and GRP manifold chambers and pump dispensers

The flexible part may be single or double sided and is made of a flexible material. The quality of the flexible material is at least a nitrile rubber.
The clamps used to seal to the pipe are to be made of stainless steel.
The entry boot must be able to maintain a watertight entry of the pipe withstanding a groundwater height of 3 meters.
This must be demonstrated by a vacuum test to a pressure of 12 kPa during 15 minutes.
The flexible part must be able to accommodate a deviation of the perpendicular up to 12° of the pipe through the cha mber wall and remain functional. Piping must be installed as perpendicular as possible. The diameter of the pipe for which a specific entry boot is suitable, is indicated by the type number of the entry boot. Only entry boots that are in accordance with the pipe (outer) diameter are to be used.
Cable entry boots may accommodate a variation in cable diameters as to the manufacturer's specification. Cable entry boots may be single or multi cable types.

Access Cover

The manufacturer recommend the following access cover and frames:

Cover type	Classification	Clear opening (mm)
FL 60	C250 / D400	600 x 600
FL 76	C250 / D400	760 x 760
FL 90	C250 / D400	Ø 900
FL 96	C250 / D400	900 x 600
FL 100	C250 / D400	Ø 1,020
FL 140	C250 / D400	1,400 x 700
FL 900	C250 / D400	900 x 900

Marking

The products will be marked with the KIWA logo.

For the different products to be carried out as follows:
By inerasable ink or paint, a sticker, a moulded imprint mentioning:

- Manufacturers name and trade mark
- Certification mark
- Serial number of the product
- Year of manufacture

Maintenance and inspection

Before entering a sump safety measures as instructed by the manufacturer must be taken.
During the 15 or 20 yearly re-qualification, the good operation the sump must be visually inspected simultaneously with underground tank.

List of documents

- Kiwa Evaluation Guideline BRL-K-903: "Guideline for Installers for installation of atmospheric storage tank and pipe systems for liquid petroleum products" (only available in Dutch language).
- Kiwa Evaluation Guideline BRL-K-21006: "PE/GRP sumps for underground fuel storage tanks, manifold chambers and pump dispensers".

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Manifold Chambers

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Dispenser sumps

The dispenser sump provides access to equipment, pumps, fittings and piping systems installed under the pump dispensers. The sump is capable of containing fuels spilt within the space of the sumps during calamities but is not intended to be used for the storage of fuels. The sump can retain its designed shape and function in any stage of its designed working life.

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