PROBLEM

The drainage of rain water at the bottom of foundation walls is a recurring problem even when the walls have been totally waterproofed.

In the presence of fluent water the walls and foundation must be protected by a waterproof sheath which covers the entire surface below ground level. In this case, the sheath must also be protected and a drainage system is necessary to remove excess water and reduce pressure against the walls. The accumulation of water is the wall below ground level as a result of increased loadings with can be double normal loadings.

The bituminous sheath may be damaged by filling material deposited against the foundation wall, causing infiltration of water which would be responsible for the slow and continuous deterioration of the building structure. If the filling material does not draw rain water away from the building in a natural drainage system, the possibility that water collects is increased along with the possibility of infiltration through small cracks in the waterproof sheath.

SOLUTION

The protection of the sheatband and drainage of water are the necessary conditions for the total protection of foundation walls in ground when we are in the presence of fluent water.

The characteristics of TEFOND DRAIN satisfy these demands as it is made of TEFOND and a geotextile in polyester.

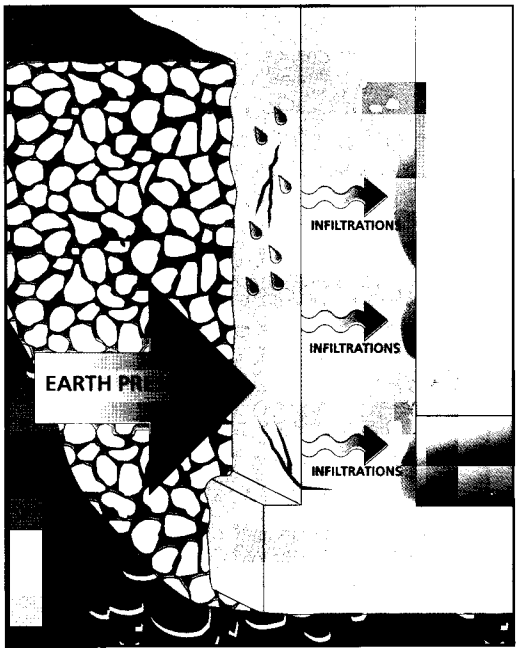
Due to this symbiosis it has been possible to combine the strength of TEFOND with the principle filtering characteristic of a polyester geotextile. This geotextile weighs 120 gr/m².

The geotextile, placed over the studs and fixed, forms an air chamber between the drainage material, which is almost always present, and the waterproofing sheet. This air chamber helps direct the water towards the drainage pipe located next to the foundation.

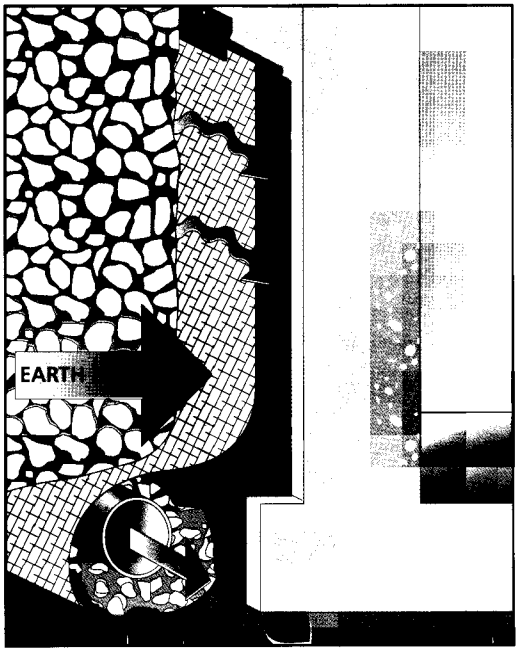
In fact, the geotextile functions as a filter for rain water, which collects in the soil, and against small debris which normally creates problems for the water flowing and clogs the spaces between drainage material placed against the walls.

The strength of TEFOND as well as its other characteristics guarantee total protection of the waterproof sheath. The installation instructions and especially the attachment of TEFOND DRAIN have been developed to avoid damage to the existing waterproof sheath. In fact, a special HDPE profile is attached near ground level to hide and protect the membrane and the polyester geotextile.

Without drainage



With drainage



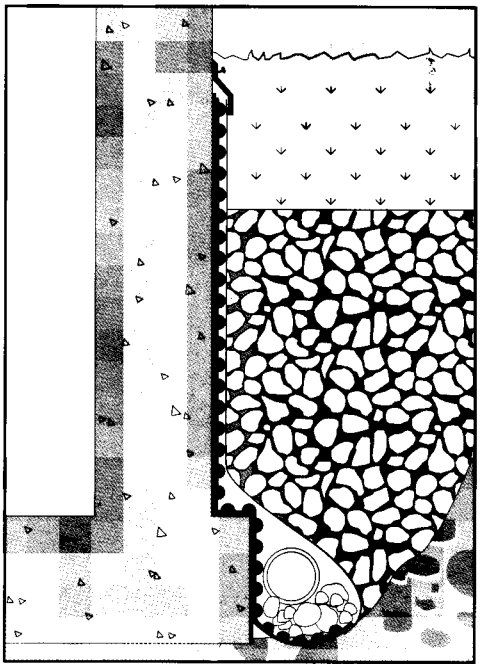
INSTALLATION INSTRUCTIONS

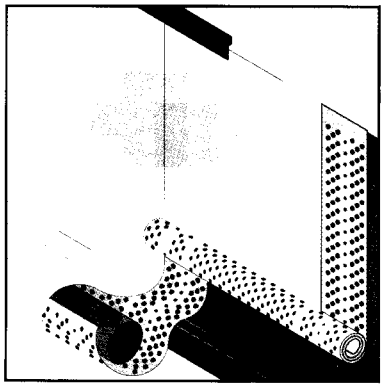
VERTICAL INSTALLATION

Follow the Vertical installation instructions given in chart A.2.

To install correctly TEFOND DRAIN against walls face, certain other instructions must also be followed:

- when measuring the dimensions of the sheet of TEFOND DRAIN to be cut, bear in mind that a flap of at least 40 cm must be folded back around the drainage pipe;
- installation the sheet with the studs and the geotextile towards the soil;
- to join the drainage pipe to the inside of the geotextile, detach the polyester from the TEFOND up to about one meter in height;
- place the drainage pipe on the TEFOND after having first placed a slab of drainage material under the pipe;
- wrap the detached geotextile around the pipe;
- cover the pipe with some drainage material to keep everything in place before back-filling.





OTHER USES FOR TEFOND DRAIN PLUS

- Drainage and waterproofing of face walls.

TECHNICAL SPECIFICATIONS

MATERIAL	HDPE combined with polyester geotextile
COLOUR	BLACK + WHITE
LENGTH	20 m long rolls
WIDTH	2,07 m
COVERAGE WITH SIMPLE OVERLAP	1,98 m
THICKNESS OF THE STUD MEMBRANE	8 mm
TOTAL WEIGHT	770 gr/m²
MEMBRANE WEIGHT	650 gr/m²
GEOTEXTILE WEIGHT	120 gr/m²
WATER PERMEABILITY	100 l/m² s (Polyester geotextile)
TENSILE BREAKING LOAD	400 N/5 cm (TEFOND) 250 N/5 cm (Polyester geotextile)
ELONGATION AT BREAKING POINT	25% (TEFOND) 50% (Polyester geotextile)
COMPRESSION RESISTANCE	250 KN/m²
AIR VOLUME	5,7 l/m²
WORKING CONDITIONS	from -30° C to +60° C.

TEFOND DRAIN SPECIFICATIONS

High density extruded polyethylene (HDPE) membrane with sealant combined with polyester geotextile(TEFOND DRAIN type) on raised 8 mm studs. Sides mechanically joined by overlapping the edges. Height 2,07 m, weight 770 gr/m², and compression resistance 250 KN/m².

TEFOND PROFILE SPECIFICATIONS

200 cm long, 7 cm finishing profile in high density extruded polyethylene (HDPE) with fixing holes along the top side every 24,5 cm.

TEFOND PLUG SPECIFICATIONS

Semispherical fixing plugs for stud membrane in solid high density extruded polyethylene (HDPE) complete with 25 mm steel nails.