**PREDL-Manhole rehabilitation FLEXLINER**

**REHABILITATION THROUGH THE CONUS OR COVERSLAB / PREDL FLEXLINER SYSTEM**

Task :

 Place :

 State :

 Constructor :

Project: Manhole rehabilitation PREDL Flexliner system

LV file: sample

Rehabilitation PREDL-Flexliner system

site equipment

Tender document

 ---------------------------------------------------------------------------------------------------------------------------------------------- Rank nbr. Specification text Quantity in EUR Unit Price in EUR Total ----------------------------------------------------------------------------------------------------------------------------------------------

1. **Manhole rehabilitation PREDL - Flexliner system**

1.1 **Measurements of the manhole**

1.1.10 Measurement of the manhole with laser scanning

 Per manhole …….

1.2. **Construction site equipment**

1.2.10 Establishing and clearing of the construction site

 for all services listed in the tender specifications.

 Per manhole …….

1.2.20 Provision of the site equipment for all services listed

 in the service description

 Per manhole …….

1.2.30

 Traffic signs and traffic facilities, including

 road marking in accordance with

 "Definitions of the Traffic Authority",

        Set-up and clearance.

 Per manhole …….

1.2.40

       Fence erection for the duration of the execution and clearance period

 as exclusion zone, at the choice of the Contractor.

        Fence height above ground 2,00m.

                                  1,000 m

1.2.50

        Provisional diversion for DN "...."

        As a closed line, material to the choice

 of the Contractor, flow cross section according to the existing

        Channel, redirection "over two provisional postures to be removed after use”

 " Inlet and respectively outlet of the pre and downstream manholes are to be equipped

 with special shut-off bladders ".

 1.000 p. ...........

 ***Summe 1.1. ------------------* Building site installation**

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 **1.3. Manhole rehabilitation**  1.000 p. ..........

1.3.10

Complete demolition of the “channel and benching”,

Made out of non-valuated concrete, thickness “approx.. 200 mm until manhole floor”

(At least 40 mm under the channel and 100 mm of the benching surface)

Clear out waste material,

Waste disposal costs are to be paid by the Contracting Authority

 1.000 p. ..........

 1.3.20.

Complete removal of the cast iron steps in the manhole,

Dimensions according to DIN 1211

Clear out waste material,

Waste disposal costs are to be paid by the Contracting Authority

 1.000 p. ..........

 1.3.30

Clean manhole construction, average deposit height

In the channel centre in ………cm, with high-pressure cleaner

130 bar, provide water.

 1.000 p. ..........

 1.2. 50 Plastic manhole base liner (for ex. PREDL® or equivalent)

 made out of hybrid resin with external quartz sand coating,

 to be fitted and adjusted on the manhole base

Flexliner – manhole base-liner DN ....... made out of waste water resistant plastic

channel DN ...........

With bounding bridges and a Styrofoam support core.

The manhole base-liner is inserted in the manhole in one piece and in a non-destructive manner and unfolded to the original size once in the manhole.

With moulded-on GRP pipe stubs for connecting to thermoset pipe materials by laminating or gluing,

or

With thermoplastic transition strips for joining with thermoplastic pipe materials by welding.

Upstand in the manhole base-liner also with inserted transition strips

for joining to thermoplastic or thermosetting linings of the

manhole rings and cones / coverslabs.

 1.000 p. ..........

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1.3.50

 Lateral inlet to the manhole as supplement, side inlet DN "...".

 1,000 p. ..............

1.3.60

 Bend in the channel

 1,000 p. .............

1.3.70

 Slope in the channel up to 100 mm ...............

 Up to 200 mm ...............

 Up to 300 mm

 Up to 400 mm ...............

1.3.80 Asymmetrically offset main channel

 1,000 p. ..............

1.3.90

 Grout the base-liner with liquid concrete

 (For ex. : PCI-Verguss-Fix), the manhole can be put in

service again after a 2 hour curing time

 1.000 p. ..........

1.3.100 Manhole ring liner made of PP system CORPROTECT 2.8 mm thick with approx. 400

 Nobs per m² on the back for anchoring in the grout and to be welded to Predl - Flexliner Base-liner

 1,000 r/m ......... ..

1.3.110 Grout the manhole ring liner with liquid concrete

 (For ex. : PCI-Verguss-Fix) the manhole can be put in

service again after a 2 hour curing time

  1.000 p. ..........

1.3.120 PP system CORPROTECT – for conus or coverslab 2.8 mm thick with approx. 400

 Nobs per m² on the back for anchoring in the grout and to be welded to ring-liner

  1.000 p. ..........

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 1.3.130 Grout conus or coverslab –liner with liquid concrete

 (For ex. : PCI-Verguss-Fix), the manhole can be put in

service again after a 2 hour curing time

 1.000 p ...........

 1.3.140 Alternativ to pos. 1.3.100:

 Manhole ring-liner made out of 3mm thick GRP, to be inserted in the manhole and

 laminated to the Predl - Flexliner Base-liner

1.3.150 Alternativ to pos. 1.3.120:

 Manhole conus or coverslab-liiner made out of 3 mm thick GRP, to be inserted in the manhole and laminated to the Predl - Flexliner Base-liner

 1.000 St ............

 **Total 1.3. ---------**

 **1.4 Building site advice**

 1.4.1 Building attendance for advising and supervision

allowance ............