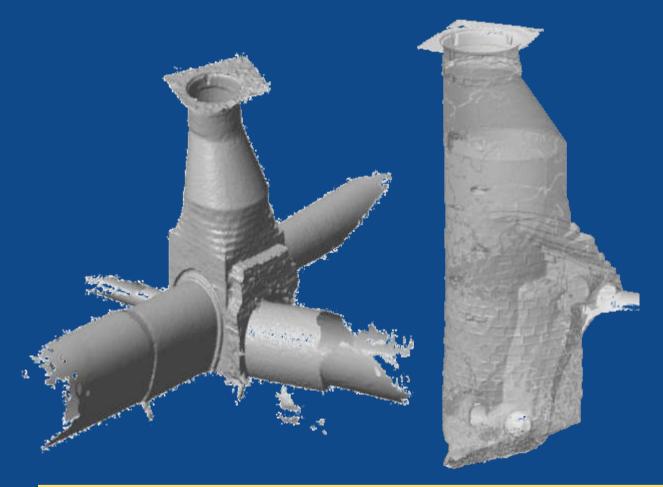


## **MANHOLE REHABILITATION**

- · Manhole-in-manhole rehabilitation
- Rehabilitation of special structures
- · FLEXLINER trenchless rehabilitation











## **REHABILITATION WITH PREDL**

### **REHABILITATION WITH PREDL PANELS**

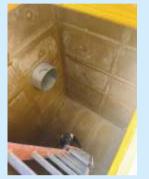
The rehabilitation method with PREDL-panels is particularly suitable for wastewater structures with exceptional geometries and high-performance requirements.

Custom designed and manufactured by PREDL, the panels are resistant to deformation, easy to transport and provide long-term corrosion protection.











# TRENCHLESS MANHOLE REHABILITATION: PREDL-FLEXLINER

With the PREDL-FLEXLINER, a trenchless manhole rehabilitation is possible within a very short time. For installation, the FLEXLINER is folded undivided and non-destructively through the cone into the manhole and unfolded back to its original size in the manhole.



## THE KNOW-HOW PACKAGE: DATA ACQUISITION – ADVICE – REHABILITATION

PREDL has the right rehabilitation solution for almost every problem:

For heavy-duty industrial manholes, pump manholes, dry weather channels in various profiles, screen structures in sewage treatment plants and much more, PREDL offers the complete package from digitization over the joint development of the rehabilitation solution down to the production of the rehabilitation components and support during on-site installation.







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## SUSTAINABLE REHABILITATION SOLUTIONS

## REHABILITATION WITH FRP COMPONENTS PRE



#### WATER PROTECTION AND SEWER REHABILITATION

Manholes are permanently at risk of corrosion. Aggressive substances not only destroy the sewage guidance channel area but also attack the rising manhole elements such as rings and cones.

Depending on the state of the old manhole and the local conditions, PREDL can offer different rehabilitation methods:

- rehabilitation system manhole-in-manhole
- manhole rehabilitation with PREDL rehabilitation construction components for special structures
- trenchless manhole rehabilitation with PREDL-FLEXLINER
- rehabilitation through replacement with PMA-Liner



A prerequisite for all rehabilitation methods is a **3D laser scanning** with the formulation of the rehabilitation proposal.

State-of-the-art laser technology enables the exact recording of the old manhole data with subsequent digitization and creation of three-dimensional rehabilitation models through to the prefabrication of precisely fitting rehabilitation components.





#### **OUR SERVICES**

- 3D-laser scanning with a laser
- Creation of an as-built drawing for the structure be rehabilitated
- Creation of an execution drawing of the built-in parts
- Technical support during the installation



#### PREDL MANHOLE-IN-MANHOLE REHABILITATION

The PREDL manhole-in-manhole rehabilitation method with a PREDL manhole base-liner is a rehabilitation solution for severely corroded and damaged waste water manholes. For the vertical rehabilitation of the manhole structure, a FRP pipe will be used.











#### **DURABLE AND EFFECTIVE REHABILITATION**

- curable corrosion protection of the manhole
- complicated manhole geometries can be realized
- structural retrofitting for standard manholes
- rehabilitation process with a service life of approx. 50 years







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