

Manufacturing
of concrete
and polymer
lining

PROTECTION OF CONCRETE WATERPROOFING



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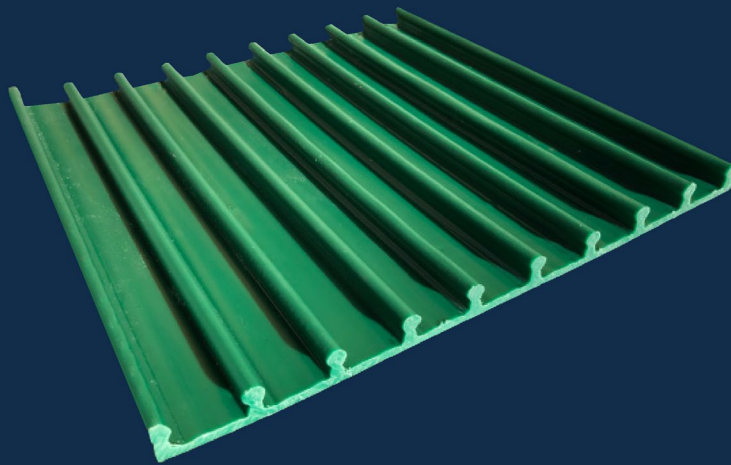
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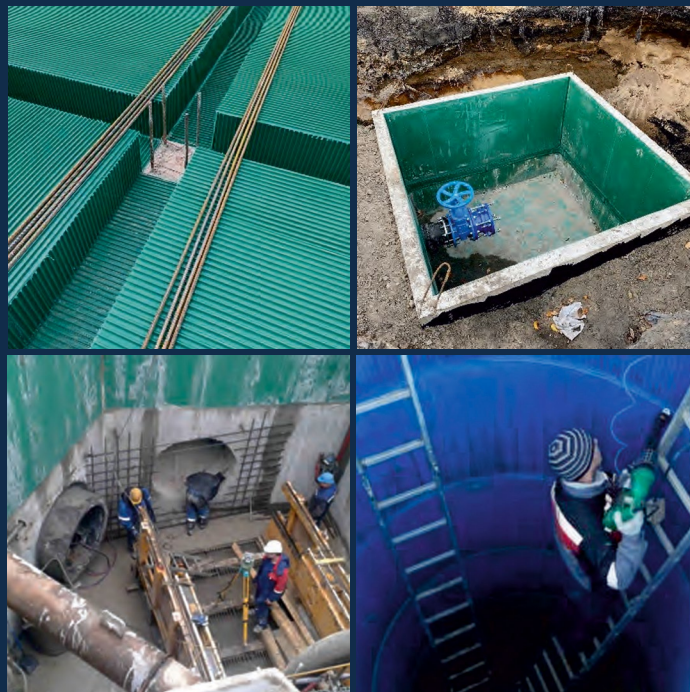
HYDR POLYMER

research and production enterprise



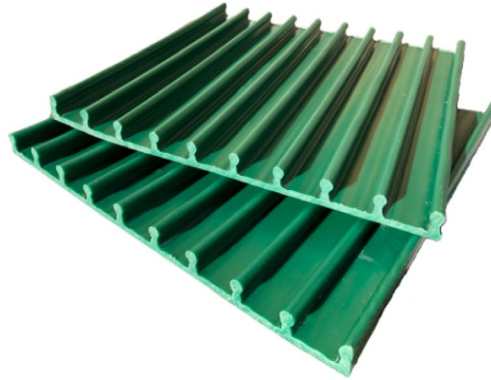
ABOUT US

JSC Research and Development Enterprise HYDROPOLYMER is specialized in production of sheets made of polyethylene and polypropylene with anchor ribs in order to protect multipurpose building structures as manhole as to manufacture reinforced concrete elements with anchor sheet lining. The company has its own design bureau, experienced specialists in construction, building and erection subdivisions, production capacities for polymer processing and manufacture of concrete products. Qualification of the personnel, collaboration with design and state organizations give a possibility to develop new materials and technologies for long-term protection of new facilities, and to use technologies for recovery of worn and emergency concrete constructions.



POLYMER ANCHOR SHEET

Polymer anchor sheet is a multipurpose solution patented by JSC R&D Hydropolymer, for waterproofing and protection of concrete surfaces against corrosion and destruction. The product warrants long-term and reliable protection of structures under extreme operating conditions. The products are manufactured of high quality raw materials: PP, PE, LDPE, HDPE.



ADVANTAGES OF POLYMER ANCHOR SHEET

Due to its chemical composition and geometrical dimensions, polymer anchor sheet combines plasticity, flexibility, corrosion resistance, as much as high strength and high rigidity. Service life of concrete structures considerably increases after lining.

ADVANTAGES OF POLYMER SHEET WITH ANCHOR RIBS

1. Outstanding chemical resistance (absence of corrosion caused by water, alkali, acids and gas)
2. Cracking and heat-ageing resistance
3. Elasticity (resistant to considerable deformations)
4. Reduction of operation costs (lifespan of 50 years as minimum, maintainability)
5. Environmentally friendly
6. Wide range of applications in concrete structures
7. Absolute mechanical anchorage in concrete
8. Simple and safe installation
9. High impact resistance
10. Absence of voids upon molding of products and installation of the sheet
11. Wide range of temperatures (-20 up to + 90°C)
12. Reduction of abrasive wear
13. Increased flow laminarity

CROSS SECTION OF POLYMER LINING SHEET

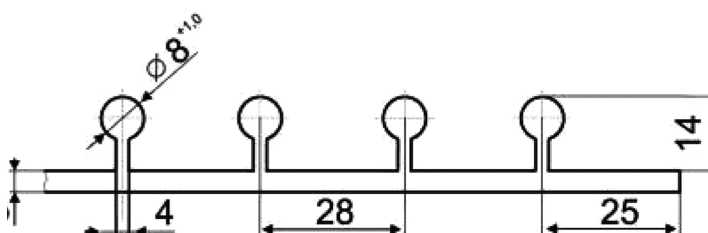


FIG. 1





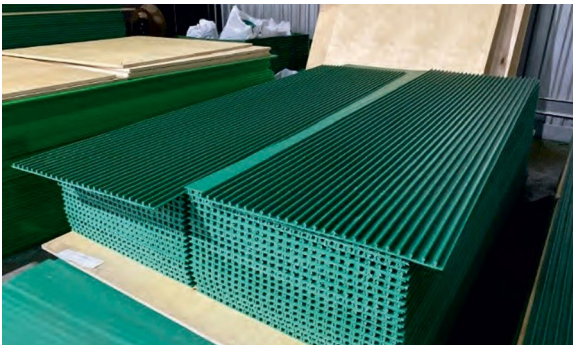
EURO-RING LINED WITH POLYMER SHEET WITH ANCHOR RIBS



ABSOLUTE LEAK-TIGHTNESS OF SEAM WELDING

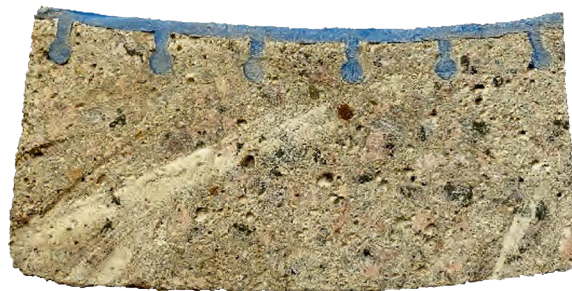
ADVANTAGES OF LINING USING A POLYMER SHEET

Lining using a polymer sheet prevents concrete corrosion, thereby expanding the structure service life. The unique system of anchor ribs ensures maximum adhesion of polymer sheet with the concrete structure. Absolute density of seam welding prevents infiltration and exfiltration, and contributes to environmental protection.



INNOVATIVE AND UNIQUE DESIGN

Unique T-shaped anchors are formed on a sheet in its manufacturing process. Configuration of the sheet with anchor ribs, anchor pitch, and size of each element are developed considering the application of various compositions of concrete mixes, their flow characteristics and filler. Arrangement of anchor ribs along the sheet gives a possibility to securely fix the sheet in a concrete structure along the whole length and to prevent formation of voids during molding.



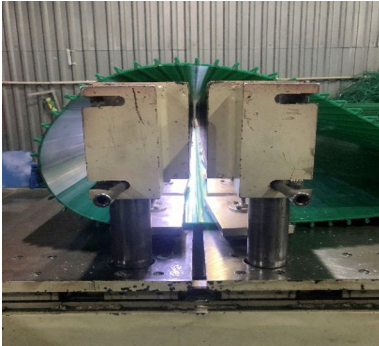
SHEET SIZE

**THICKNESS IS 1.8 TO 5 MM;
SHEET WIDTH IS 750 MM;
LENGTH OF PRODUCTS IS UP TO 50 M.**



RELIABLE WATERPROOFING

A polymer sheet is interconnected with anchor ribs by welding. The result of such work is a durable and leak-tight connection. At the Customer's request, various methods of elements welding can be used:



BUTTWELDING USING A HEATER ELEMENT



EXTRUSION MANUAL WELDING



COMPREHENSIVE SOLUTIONS

If necessary, experienced employees of JSC R&D Hydropolymer can conduct training on installation and welding in the territory of the enterprise or at the facility.

LINING OF PRECAST CONCRETE STRUCTURES

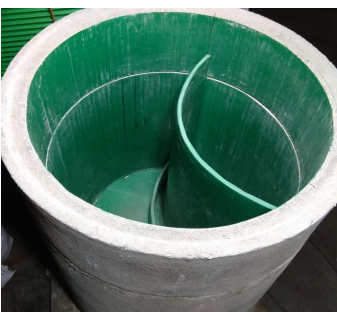
Polymer sheet with anchor ribs is widely used for manufacturing of new concrete structures with lined inner surfaces, that allows for using for sewage collectors with high aggressivity of liquids transported and gas extracted by them.

Specialists of JSC R&D Hydropolymer developed a technology allowing for securely protecting concrete of precast structures:

- SCOPE OF APPLICATION:**
INSPECTION MANHOLES OF WATER DRAINAGE AND SEWAGE NETWORKS
CONCRETE PIPES
OIL AND GASOLINE SEPARATORS (GREASE TRAPS)
PRECAST CONCRETE ELEMENTS



LINED ELEMENTS OF MANHOLES



GREASE TRAP



CONCRETE PIPES LINED WITH POLYMER SHEET



ALL THE BEST FOR YOUR COMFORT

To manage the work of operating personnel, safe operation and convenient descent and rise to thermal chambers, reservoirs, sewage and pump stations, water line, drainage and inspection manholes of storm water, production sewage and soil systems, we offer the product manufactured by JSC R&D Hydropolymer:

STEP IRON WITH POLYMER COATING

Polymer coating of the iron prevents slippage upon movement of operating personnel. They are securely fixed in concrete structure due to a special design shaped as an anchor dowel.



WELDING ROD IS MADE OF PP, PE, HDPE, OR LDPE

WELDING ROD

When installing a sheet with anchor ribs, or mounting reinforced concrete elements fitted with lining, to ensure mechanical and waterproof fixing of elements between each other, a welding cord is used to weld the sheet directly at the facility. Welding cord is made of the same material as the sheet with anchor rib.

LINING OF NEW CONCRETE STRUCTURES

A formwork shall be used when installing polymer lining sheets within the limits of waterproofed surface of reinforced concrete structure. Upon concrete hardening, polymer sheets are waterproofed using extrusion welding.



SCOPE OF APPLICATION:

UNDERGROUND STRUCTURES; CHEMICAL RESERVOIRS;
WATER TREATMENT FACILITIES; COLLECTORS; TUNNELS.



CLEAN WATER RESERVOIRS FACED WITH DRINKING QUALITY LINING SHEET.

DRINKING WATER

Polymer sheet with anchor rib is used for manufacturing of clean water reservoirs, for lining of drinking water tanks. JSC R&D Hydropolymer has a vast experience in construction of new and sanitization of existing tanks for drinking water.

SANITIZATION OF EXISTING STRUCTURES

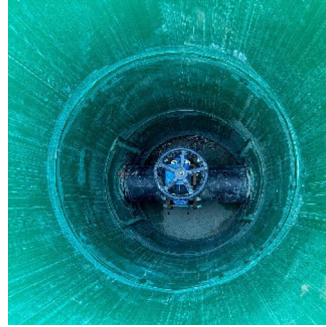
Polymer sheet with anchor ribs is widely used for reconstruction and repair of the existing structures. Concrete reservoirs remain untouched, the sheets are additionally installed using a formwork and extend the service life of structures.



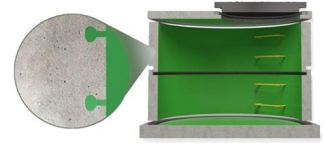
OUR PROJECTS:



RESTORATION OF THE SEWAGE COLLECTOR DISCHARGE CHAMBER



RECONSTRUCTION OF THE EXISTING MANHOLE

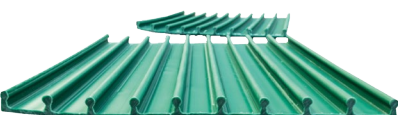


JSC R&D HYDROPOLYMER IS ...

- Own innovative manufacturing of polymeric materials and reinforced concrete products;
- Experience of work with large-scale customers over 5 years;
- Many successfully completed projects, including those customized;
- Vast experience in reconstruction of water treatment facilities, sewage pits, chambers and collectors;
- Acknowledgments from Russian construction, design and installation organizations;
- Vast logistical experience in supplies throughout Russia and to the Republic of Belarus.

OUR PARTNERS ARE

- construction companies operating under EPC-contracts;
- building and erection contractors and engineering companies performing installation of external utility networks;
- design institutes dealing with design of external water supply networks and sewage systems; concrete production of precast elements, pipe production;
- state and municipal organizations, including SUE VODOKANAL, the Government of Saint Petersburg, the Ministry of Defence of the Russian Federation.
- large private and state production enterprises in food, chemical, and fuel industries.



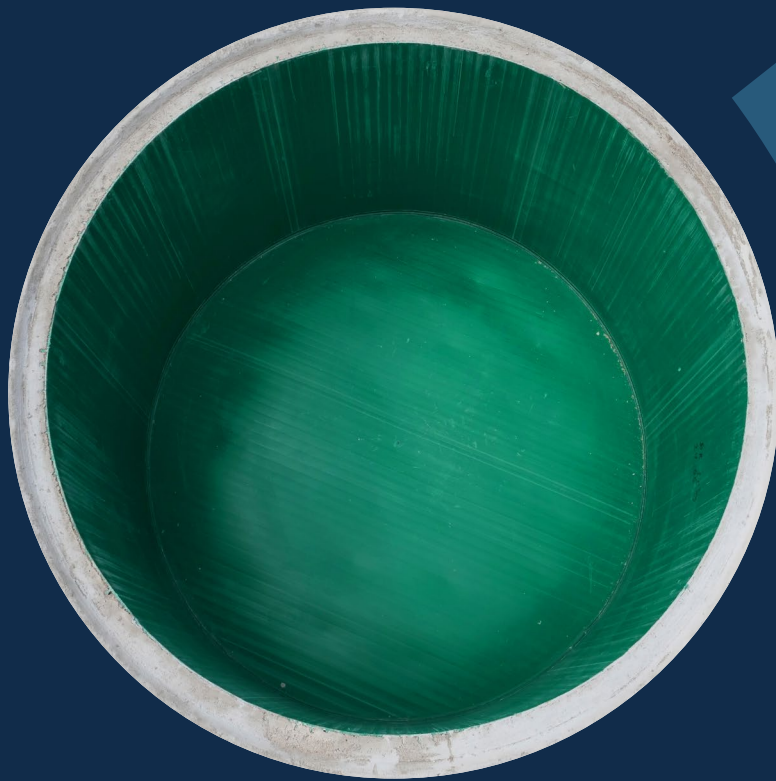
WE CAN FIND AN OPTIMAL SOLUTION FOR YOUR NEEDS.



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