

COMBINATION COATINGS PTFE, FEP, PFA

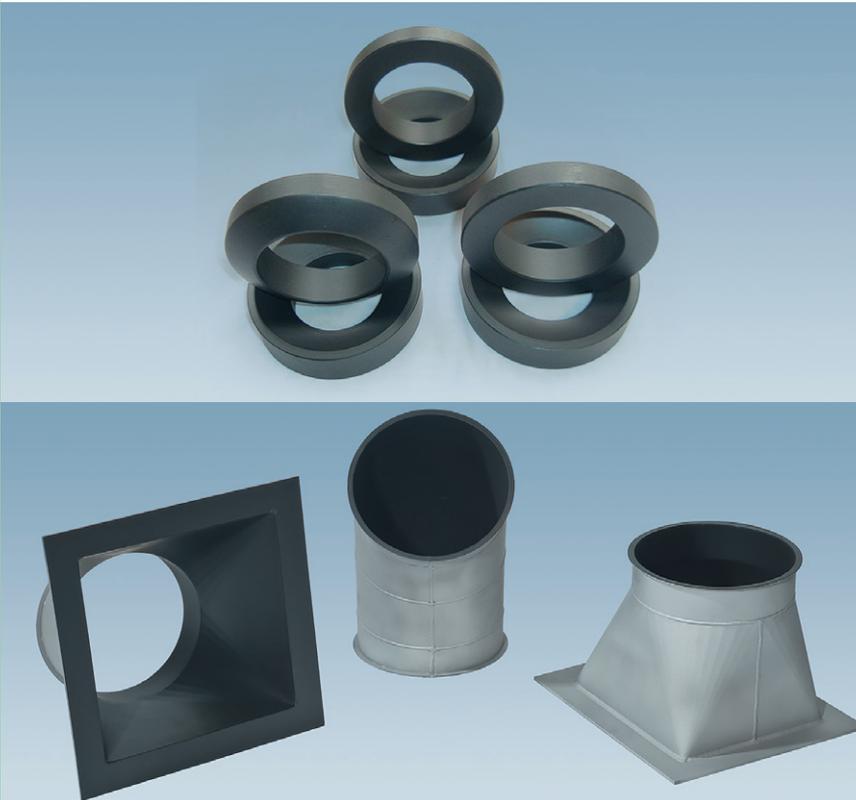
Premium coatings for all
industrial fields

Rudolf Gutbrod GmbH

COMBINATION COATINGS – THE IDEAL SOLUTION TO STRINGENT WEAR RESISTANCE REQUIREMENTS!

Wherever machine components or conveyor elements are exposed to above-average levels of stress, special coatings are vital.

The newly developed PTFE, FEP, PFA combination coatings from Rudolf Gutbrod GmbH are designed to provide a safe and reliable solution to practically every conceivable type of surface requirement – such as traction, sliding properties, anti-stick behaviour or wear resistance.



ONLY THE VERY BEST FOR OUR CUSTOMERS!

What this means for our customers is a massive improvement in durability, greater wear resistance and a longer service life for their components. Faults are minimized, productivity is significantly improved.

To allow us to guarantee optimum quality for our customers, the PTFE, FEP, PFA combination coatings are produced by us in-house. This has been made possible by investment in the very latest plant engineering and exhaustive testing of the process over the course of intensive and consistent development work.

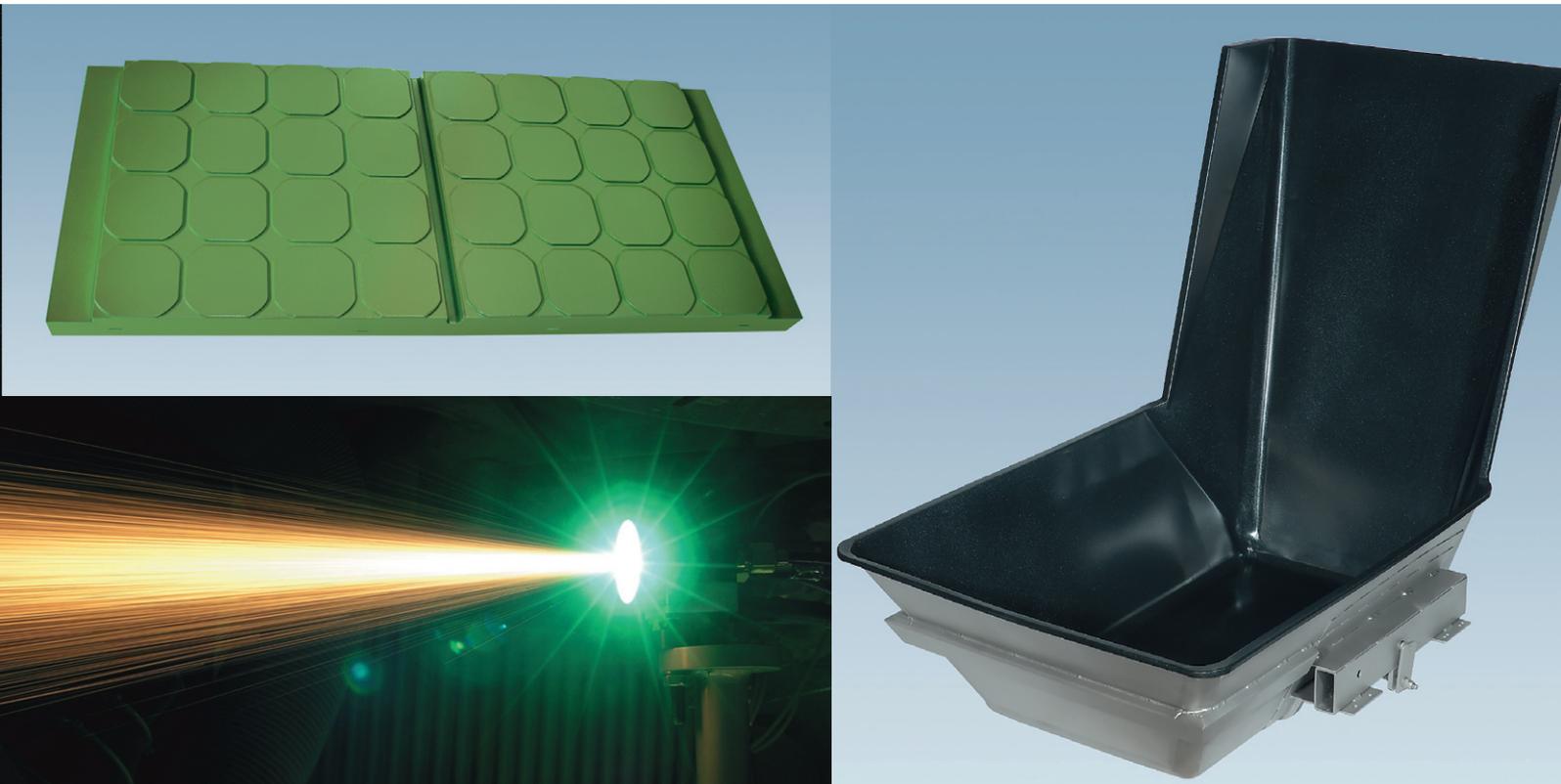
NON-STICK AND DRY LUBRICATION COATINGS FOR SMOOTH APPLICATION

The basis for the Gutbrod combination coatings is a wear-resistant, thermally sprayed hard substrate layer made of metallic material. Using a special flame spraying technique, this is melted on and applied using atomizer gas onto the component surface being treated.

The mechanically stable base coat formed in this way creates a matrix into which fluoropolymers such as PTFE, FEP and PFA can be embedded to

achieve perfect anti-stick and wear resistance properties. This concept permits combinations of all of our offered coating systems.

The result: wear optimized combination coatings offering a wide spectrum of industrial requirements and applications with perfect anti-stick properties and outstanding surface hardness.



Your benefits at a glance

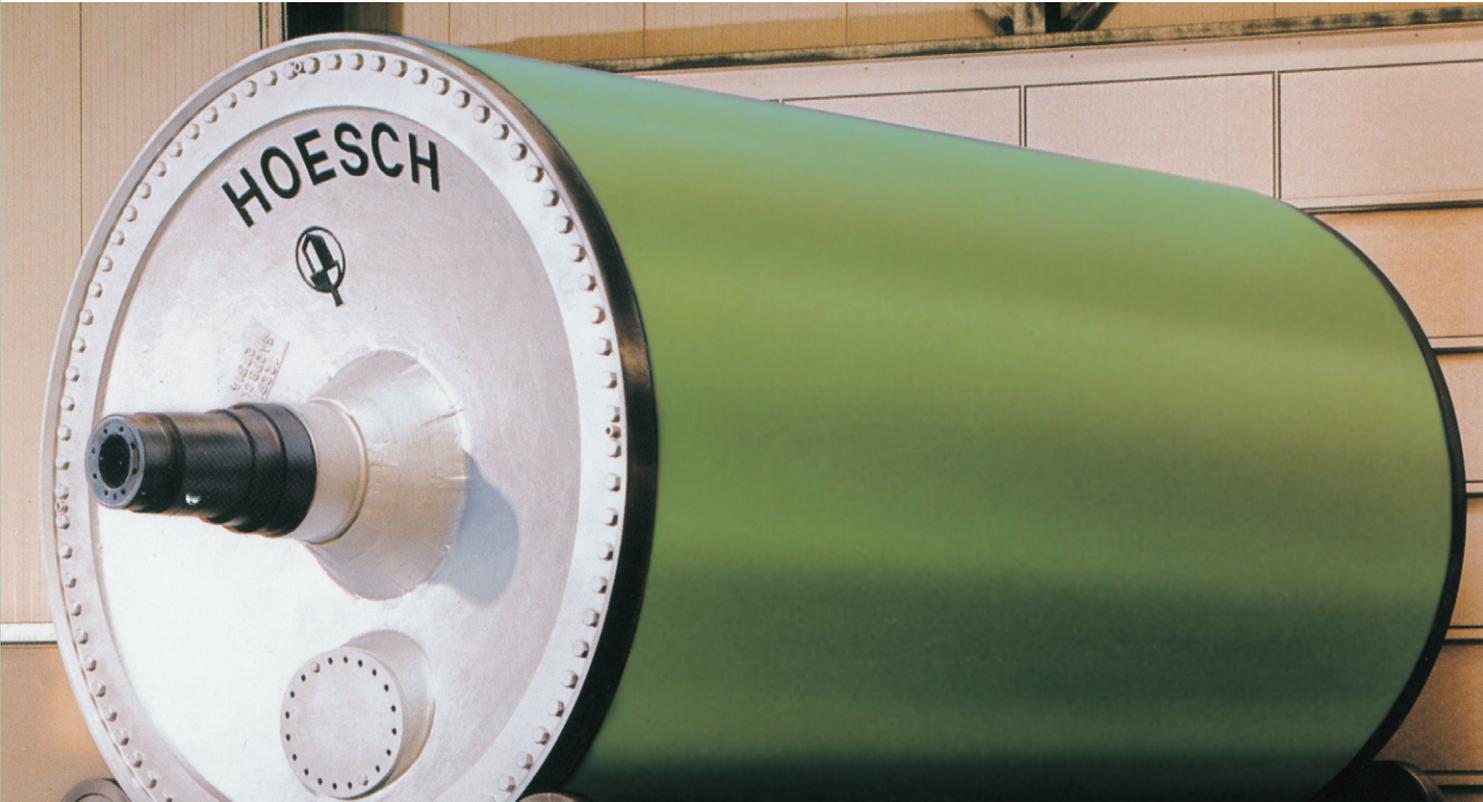
- Improved quality due to lower wear
- Increased working speed
- Trouble-free material transport
- Reduced machine standstill periods
- Higher productivity
- No product deposits permitting improved cleaning
- Lower maintenance and servicing work

Application examples

- Rollers
- Containers
- Heating plants
- Coating racks
- Sealing jaws
- Casting moulds
- Screws
- Knives
- Slide rails
- Conveyor units
- Industrial baking tins and sheets
- Pressure, guide and deflection rollers

SPACE-APPROVED AND 'HASH BROWN' TESTED

Everyone knows PTFE – better known under the brand name Teflon® from the American chemical company DuPont – from home as the spaceapproved, non-stick finish to prevent fried eggs and hash browns sticking in the frying pan.



NOT ONLY GREAT IN THE PAN

A very attractive characteristic of PTFE is its physiological safety. This makes PTFE particularly interesting for use in the area of drinking water and in contact with food. Thus, the famous Teflon® pan is only a small excerpt from an extremely far-reaching and extensive field of application in industry.

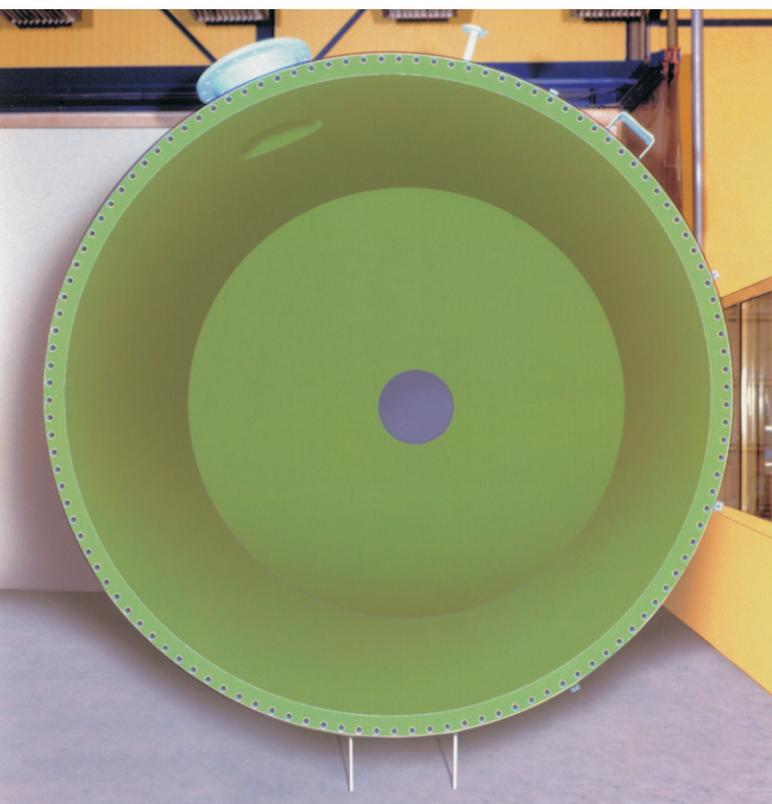
Everything that has to run smoothly and where no product caking is desirable is a potential application for a PTFE coating.

But PTFE is also an indispensable material for industrial non-stick and dry lubrication coatings, due to the numerous positive characteristics which are unbeatable by any other plastic material.

Without PTFE, many modern procedures would be inconceivable. New applications are being developed all the time.

PTFE coatings are outstandingly suitable on metals, glass and ceramics. Many years of experience and the fully developed technology from Rudolf Gutbrod GmbH in this area enable the highest level of perfection. Thereby, no limits with regard to dimensions are set either upwards or downwards.

Gutbrod coats both minute objects of a few millimeters as well as giants, e.g. construction parts, with its maximum oven sizes of 7 x 5 x 5 m and 9 x 2.5 x 2.5 m.



Practical examples

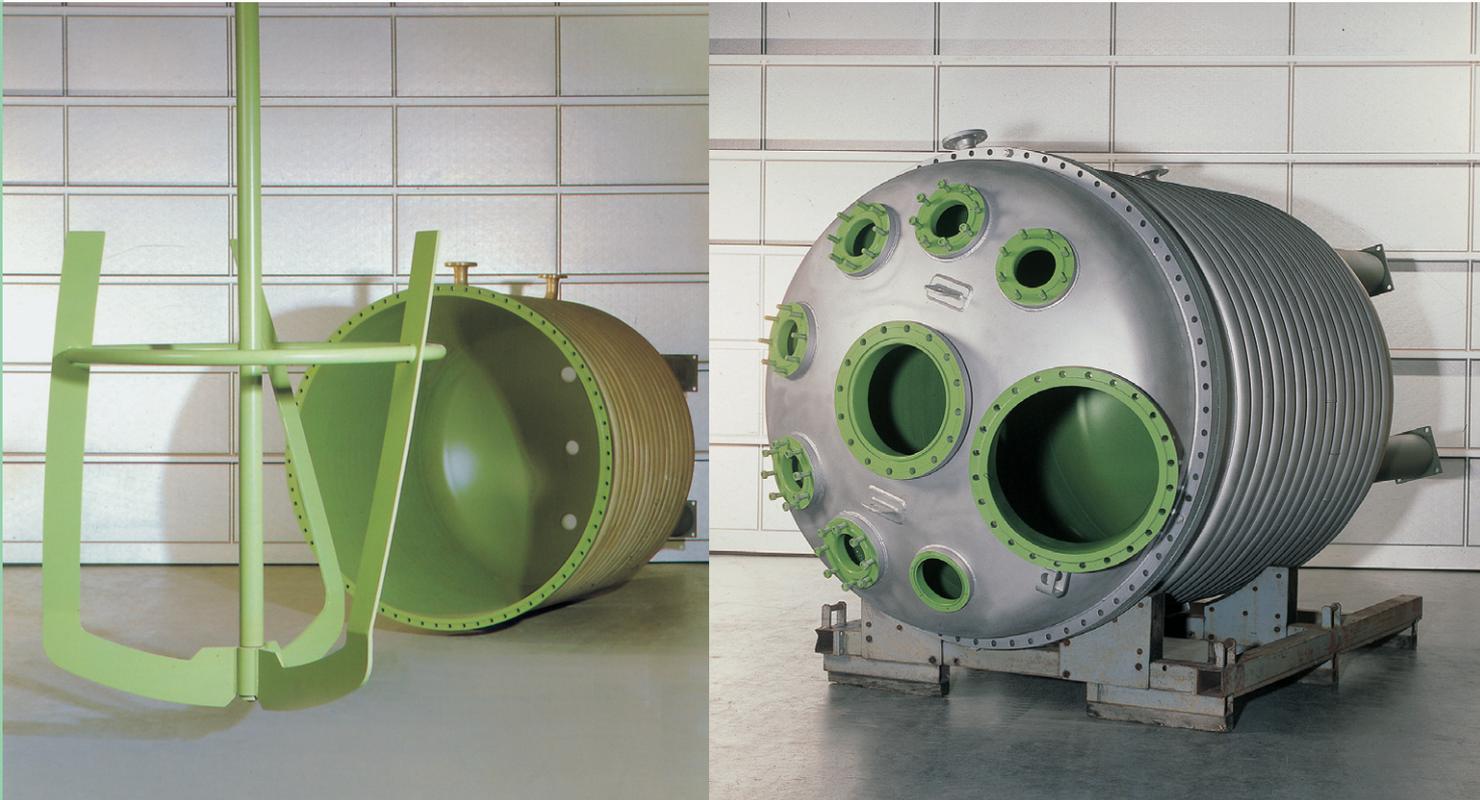
- Scraping knife
- Baking sheets
- Containers
- Mandrels
- Colour mixers
- Pastry form rollers
- Tapered valve plugs
- Cookie cutting rollers
- Guide plates
- Glue dispensers
- Press plates
- Pump pistons
- Tyre moulds
- Screw conveyors
- Dough processing tooling
- Funnels
- Drying drums
- Packaging equipment and more besides



ELECTROSTATIC, AIRLESS OR WITH COMPRESSED AIR – ALWAYS A SMOOTH RESULT

With Teflon® PTFE, Teflon® FEP and Teflon® PFA, three coating systems are available that cover every possible need. Rudolf Gutbrod GmbH offers the right coating system – from the simple to the super non-stick coating – to match every requirement.

Also in the field of dry lubrication coatings, Gutbrod has perfect solutions to hand. PTFE onelayer systems are available, depending on the application, in many different types and qualities.



NON-STICK AND DRY LUBRICATION COATINGS FOR SMOOTH APPLICATION

Teflon® PTFE coatings are the ideal solution in all areas of the production process where operational breakdowns can occur due to contamination or incrustation.

The general advantages at a glance

- Increased production rate
- Continuous working process
- No downtimes
- No adhering of foreign substances
- Solution to reject problems
- FDA conform
- Also available as an electrically dissipating version

They are used everywhere where self-lubrication and dry-running operation characteristics are desired. In the electrostatic procedure (powder coating with Teflon® PFA), workpieces are coated perfectly without any solvents up to the highest level of difficulty, in order to achieve increased reliability concerning abrasion.

In the spraying sinter procedure (airless and compressed air process), Gutbrod works with Teflon® PTFE and Teflon® FEP. The coating is sprayed on and then „sintered“ at 220°C to 420°C.

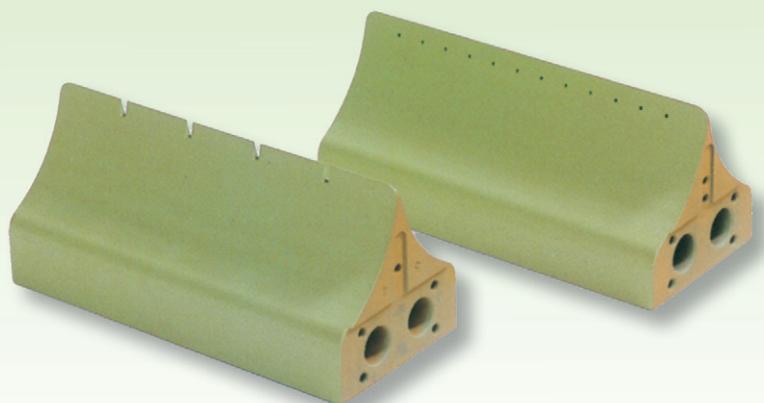
For pretreatment of the substrate, the most modern plant (defatting, aluminium oxide sandblasting) is available. Sintering capacity encompasses 16 ovens with a maximum size of 7 x 5 x 5 m and 9 x 2.5 x 2.5 m.

Controls after coating to ensure perfect surfaces, safe non-stick effect and correct layer thicknesses belong to the Gutbrod standard, as well as continuous testing of raw materials and production methods.



Special advantages of dry lubrication coatings

- Safe lubrication also at high pressures and extreme temperatures
- Less friction and abrasion
- Longer lubrication intervals
- Lower maintenance costs
- Clean, dry surfaces
- Controlled lubrication
- Good corrosion protection



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**THE RUDOLF GUTBROD COMPANY:
PIONEER OF SURFACE TECHNOLOGY**



Rudolf Gutbrod GmbH in Swabian Dettingen/Erms continues to set new standards in innovative coating technology. The company is leading in Europe as a processor of fluorinated polymers.

The enterprise was founded in 1964 and is a pioneer in Germany in surface coating technology with fluoropolymers. It is also a licensee in Europe of well-known raw material manufacturers and is one of Europe's top addresses as far as functional

coatings with non-stick effect, low friction, chemical protection and corrosion protection are concerned. State-of-the-art technology is ensured through continuous development work.

Raw material procurement is undertaken on a world-wide basis. International and permanent exchange of ideas will also ensure in the future that the highest possible quality will be maintained in solving the different requirements of our customers.



All statements, information and data are given to the best of our knowledge. A guarantee, obligation or liability cannot be derived from this in any way. Gutbrod reserves the right to make changes to the product range and to product extensions. EN_07/16