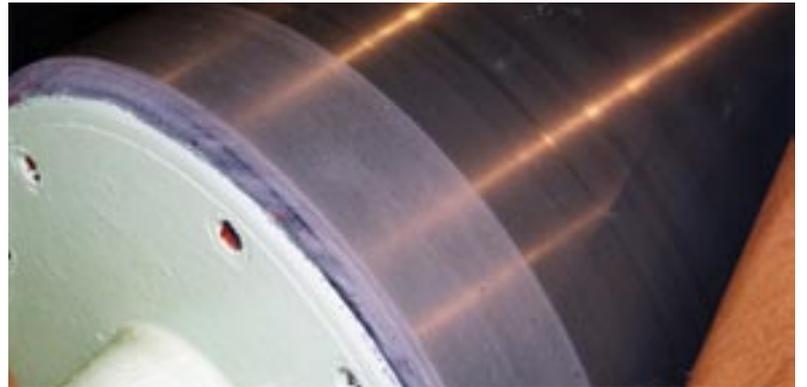




Some paper mills started upgrading and repairing their rolls with composites as early as in the 1980s. Since then, some of these mills have renovated hundreds of rolls, with the help of both employers and entrepreneurs. They have also protected complete rolls from corrosion with such a success that they decided to order new rolls where the manufacturer already had employed the composite.

When visiting some of these paper mills, finish roll manufacturers have been able to see for themselves how well the composite can protect against corrosion, making it unnecessary to replace the rubber. Some manufacturers have adapted this new technology and are now informing their customers about the composites economical benefits.



Composites replace hard rubber on new and renovated rollers

Save time, money and reduce the effect on the environment by reducing heavy transport.

A key factor for our European network is that we have our own local roll service centres where both skilful and resourceful companies can carry out composite coating on both new and renovated rolls.

Instead of sending the rolls to the manufacturers for coating with hard rubber, the paper mills can, as an economical alternative, choose to do everything at our roll centres.

It is often worth renovating a roll instead of buying a new one, as composite materials are more expensive than hard rubber.

THE ROLL CENTRES can repair and upgrade all types of rolls. At our disposal, we have lathes which can take all lengths and dimensions up to 12 meters and 30 tons.

We also have the vital years of experience and competence to carry out:

- Crack indication (None destructive testing)
- Shaft replacement
- Removal of damaged coating/rubber
- Blasting to the necessary cleanness and profile
- Application of composites by hand or spray
- Grinding
- Balancing

It is extremely important to blast to the right profile and cleanness before carrying out the actual coating process. This is necessary in order to obtain the optimum adhesion characteristics and make sure that the best possible Life Cycle Cost (LCC) is attained.

Many paper mills have seen corrosion in the edges of the rolls.

That is why so many paper mills have renovated their damaged hard rubber with composites.

In comparison with alternative solutions, the method has generated big savings.

Roll makers in both Sweden

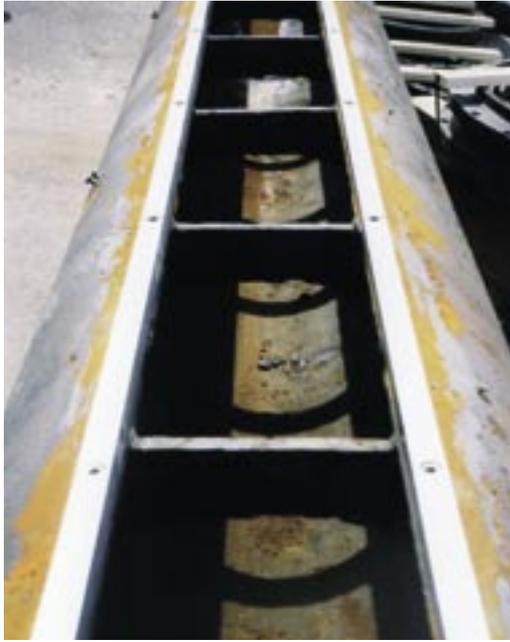
and Finland have started to use composite coatings even on new rollers, in order to increase the

life cycle and minimise running costs.



None destructive testing – crack indication.

Don't let your capital corrode



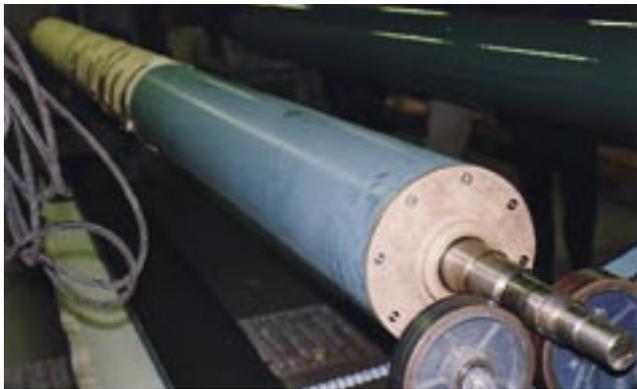
Some suction boxes and other equipment are still made of cast iron. If the cast iron is not upgraded and renovated in time it will corrode, and the company wastes money.

We have renovated and protected thousands of vacuum pumps, rolls, etc made of cast iron. With the right surface preparation and the right choice of products we can guarantee 100% successful and economical applications. This way the equipment will be upgraded and in most cases perform better than new equipment made of cast iron would do.

The upgraded and renovated area will not corrode as easily as the untreated area.

This way, the life cycle (which already is paid for) is extended, which is favourable for both the budget and the environment.

It only costs half as much to repair and upgrade the cast iron instead of buying entirely new parts. When stainless material is used the cost is often three times.



More and more rolls are being protected by composite materials instead of hard rubber, as rubber has shown to possess weaknesses in areas where the composite is strong.

The composites are applied by hand or sprayed on the roll after the right surface preparation has been carried out.



Other materials, knowledge and resources that we are working with are:

- Folla Techs patented "non stick" layer which is used mainly on drying cylinders.
- Mobile thermal spraying and grinding of supporting rollers.
- Cleaning of filters, wires, drying cylinders and paper mill machinery.

In order to repair and upgrade rolls the equipment for turning, grinding, and balancing must be proportioned to accept the large rolls which are used within the industry today.

We can accept rolls up to 12 meters length and 30 tons weight, thus, we can treat most of the rolls that require composite coating.