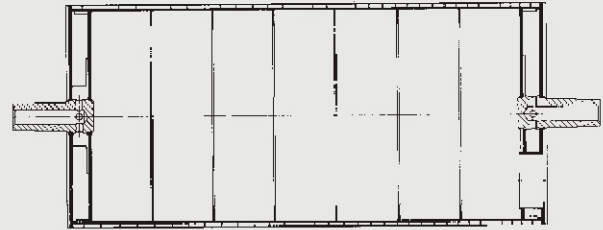


Thermo oil - heated Double Shell  
Cylinders / MDO Rollers



Thermo-Oil-Heated Roller



Textile finishing plants (especially those involved in thermo setting of technical woven fabric) as well as the plastics and film industries normally demand cylinder surface temperatures up to 300 degrees C. Such high temperatures cannot be obtained economically with steam-heating. The steam pressure at a steam temperature of e.g. 250 degrees C exceeds 40 bars and require an untenable high mechanical capacity. Furthermore these high pressure values are not available in most of the plants of the textile and plastic industries.

For this reason the above mentioned processing ranges are preferred to be equipped with thermo Oil-heated roller and cylinders, which offer a great advantage at processing temperatures from 180 up to 300 degrees c.

A further advantage of thermo Oil of the heating is that it offers the possibility of heating below an operating temperature of 100 degrees C, which is not given with steam-heating because of the specific properties of steam.

The thermo Oil-heating of a roll requires a special design and construction. A typical heating rolls for the heating with thermo Oil.

The rollers are in double shell construction with forced thermooil circulation via a guide spiral system. The precise oil-guidance within the roller is of utmost importance. The flow speed of the Oil ranges from 1.5m/sec up to 2.5 m/sec. The thermooil rate of flow per hour and per heating roller is a further important factor in order to guarantee a temperature tolerance below 1 degree C at the cylinder surface. The thermo Oil rate of flow depends on the dimensions of the roller and the calculated heat transfer. The "FOURWENTS" Themooil Rollers guarantee a temperature tolerance below  $\pm 1$  degree C across the entire cylinder surface, for rollers with a cylinder width up to 6000 mm.

The thermo Oil inlet and outlet of the roller are arranged opposite to each other or at the same cylinder side depending on the size of the roller via special thermo Oil rotary joints with rotating carbon seats and flange connections to the roller. To ensure an absolutety tight connection between the piping and the rotating roller it is necessary to use only thermo Oil joints of best quality. Of further significance is the precise and tensionless mounting of the rotary joint into the machine. "FOURWENTS" have more than 30 years of experience regarding the manufacture of thermo Oil-heated Roller.