

SWT 315 Manual



The SWT 315 is a measuring probe that is specially designed to measure the surface temperature of rotating cylinders and rolls in the pulp and paper industry.

The SWT 315 measuring probe consists of a measuring head mounted on the end of a telescopic rod by means of a universal joint and a ball joint. The ball joint and measuring head can easily be adjusted to a suitable angle in relation to the rod. The universal joint in its turn ensures that the measuring head is in correct contact with the cylinder surface. The probe is connected to the Swema 3000 or SwemaTemp 20 digital instrument so that it forms a single unit. If it is desired to have the display instrument and measuring probe separated, a 10 m long extension cable can be connected between them (Art No. 262.222)

The measuring head has four self-lubricating wheels mounted on a casing. When measurement is in progress, these wheels roll on the cylinder. The measurement pressure remains constant the whole time.

METHOD OF MEASUREMENT

Heated air from the rotating cylinder is insulated inside the casing. (The casing is insulated and ensures that the ambient temperature does not affect the temperature measurement.)

MEASUREMENT

When carrying out measurement, connect the sensor to the measuring instrument, set the ball joint to the desired angle and raise the protective cover.

Place the measuring head on the cylinder so that all the wheels of the "carriage" roll on the surface. It doesn't matter for the measuring values in which direction you place the sensor. Hint: If possible, place the sensor so that the protective cover points in the same direction as the cylinder rotation. The reason for this is because the risk to scratch the paper cylinder surface with the cover is less if it follows the rotation.

Press the measuring head lightly against the cylinder. The universal joint now ensures that the carriage is brought into alignment on the surface of the cylinder and, if positioned correctly, runs lightly on the surface. Connect the measuring current by selecting a suitable measuring range on the display instrument.

The measuring point should be chosen with care and protected from draughts. When carrying out measurement on paper machines, measure at least 50 cm inside the edge of the paper web. When checking a permanently installed CTE 60 cylinder temperature sensor, measurement should be carried out immediately before or after it.

The SWT 315 is designed for measuring the temperature of rotating cylinders. If the temperature of a stationary surface is measured, a local rise in temperature will take place under the sensor because the casing is heat-insulated.

On conclusion of measurement, lower the protective cover over the element.

MAINTENANCE

Clean the sensor and keep it free from dust, lint and the like by brushing it carefully with a soft brush. It is important to exercise care when cleaning the sensor and to make sure that the element is not deformed or moved out of position, but lies flat and level with the edge of the yoke.