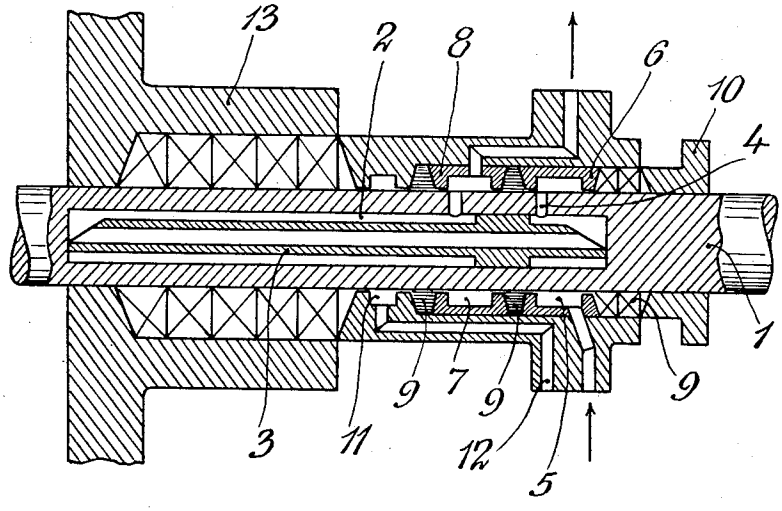
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PACKING BOX WITH CIRCULATING COOLING WATER

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PACKING BOX WITH CIRCULATING COOLING WATER

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1 Claim. (Cl. 286—27)

In connection with shafts which are provided with interior cooling it is known to provide one of the parts of the packing box with interior annular channels, which are connected by means of radial channels with the interior cooling conduits in the shaft.

With this arrangement it has been found that owing to the slight clearance which must necessarily be present between the solid parts of the packing box and the rotating shaft leakage may very easily occur between the supply and outlet channels in the inner surface of the packing box element, with the effect that the cooling water supply to the interior of the shaft is more or less reduced, the cooling water taking the shorter route along the surface of the shaft between the annular channels in the packing box element.

This drawback is avoided in accordance with the present invention by locating the annular channels through which the cooling waters are conducted to and from the radial channels in the shaft in separate loose rings, which fit into the interior of the packing box and on both sides of which there is placed packing material, by means of which an effective seal is obtained between the separate annular channels without exposing the shaft or the solid parts of the packing box to undue wear.

A form of the invention is illustrated on the drawing by means of an axial sectional view through a packing box.

1 is the shaft which is provided in a known manner with an interior channel 2 for cooling water, which is supplied to the inner end of channel 2 by means of an inner coaxial cooling water supply tube 3. From the exterior end of channel 2, where the end of inner tube 3 opens, one or more radial holes or channels 4 lead to the surface of the shaft and open into an annular channel 5, which is located in accordance with the invention in a loose ring 6, fitted into the sleeve of the packing box. The outlet channel 7 for cooling water is located in a similar loose ring 8 and between rings 6 and 8 as well as on both sides of said rings there is placed packing material 9 so that the whole may be pressed together by means of the auxiliary sleeve 10 cooperating with the main sleeve of the packing box.

Separate from the inner channel 7 the packing box sleeve may be provided with an annular channel 11 connected with an outlet channel 12 for liquid which may leak through the main packing box 13.

Further channels for the introduction of lubricating agent etc. may also be provided.

I claim:

A packing box comprising a sleeve, separate annular bodies located in the packing space provided in the interior of said sleeve, packing material separating said annular bodies, an auxiliary sleeve for compressing said packing material fitting into the opened end of the packing space provided in the packing box sleeve, a plurality of interior annular channels for the supply and outlet of cooling liquid to cooling channels in the interior of the rotating shaft located in said annular bodies, said annular bodies being axially movable with relation to the packing box and the rotating shaft and said annular channels in said bodies being substantially wider in an axial direction than the openings of said cooling channels in the interior of the rotating shaft so that fluid may be transmitted from the annular channels to the channel openings of the shaft when said annular bodies are displaced in axial direction upon said shaft.

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