STUDIES ON THE ENERGY LOSS COEFFICIENT IN THE TRAIL BEHIND THE WIRE TIES OF THE STEAM TURBINES BLADES

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ABSTRACT

The long blades of the last stages in the low-pressure cylinders of the steam turbines are usually fitted with wire ties raise the blade resistance to torsion and bending oscillations.

These wire ties are perturbing the flow of steam and subsequently introducing supplementary losses. This paper determines the energy loss coefficient in the turbulent trail formed downstream, behind the wire ties. Finally the expression for the energy loss coefficient is found to e depending on rate between the diameters of the wire to the pitch of the blades at the height where the wire ties are placed.

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