

RESEARCH ON THE LONG BLADES OF THE STEAM TURBINE

Ion OPREA, Gabriel Paul NEGREANU,
"Politehnica" University of Bucharest, ROMANIA
Splaiul Independentei 313, tel. 4029158, fax
e-mail: oprea@caz.mecen.pub.ro, gabineg@caz.mecen.pub.ro

ABSTRACT

Long blades of the final stage ensure the improvement of the output and compactness for large steam turbines. The paper refers to the long blades design using two different methods. The first method is based on the thermal and gas dynamics computation applying 3D flowing laws. For the second method the profile was obtained using the geometrical principles of homothetic with the existing long blades. The radial trends of the main blade characteristics and the compatibility of the two methods are presented.

REFERENCES

- [1] SCEGLIAEV A.V. "Steam Turbines", Ed. Mir, Moskva, 1978;
- [2] TROIANOVSKI B.M., FILIPPOV G, BULKIN A. "Steam Turbines for Nuclear Power Plants", Moskva 1987;
- [3] OPREA I. "Steam and Gas Turbines", Ed. Printech, Bucharest 2004;
- [4] HESKETH J.A., TRITTHART H., AUBRY P., "Modernisation of Steam Turbines for Improved Performance", GEC Alsthom Symposium sur les turbines a vapeur et les alternateurs, Monaco, 12-14 oct. 1994;
- [5] NEFT H.G., FRANCOVILLE G., "New Steam Turbine Concepts for Higher Inlet Parameters and longer Last-Stage Blades", Power-Gen 98 Conference, Milano, 1998;
- [6] WALLON M., "Les dernieres ailettes: facteur clé dans l'évolution des turbines a vapeur", Rev. Alsthom, nr.9/1987