

M. Samet Yakut (Supervisor: Ozan Keysan)

Title: Refurbishment & Alternating Winding Type of a 44 MVA Hydro Generator

Abstract:

Refurbishment of installed old hydro generators, which are producing most of the low carbon energy, are important for sustainable energy resources. Refurbishment also enables to increase the power rating of the generator depending on the condition. Optimizing the refurbishment process with the constraints of the operator company, and the design of Roebel bars are presented. The approach shows the boundary limits of the objectives of optimization depending on the machine parameters. Improvements are made on the Roebel design by including the manufacturing details. The process and results of a case study is discussed in the presentation.