Modeling of Crack Growth in Railway Axles under Static Loading

Authors : Zellagui Redouane, Bellaouar Ahmed, Lachi Mohammed
Abstract : The railway axles are the essential parts in the bogie of train, and its failure creates a big problem in the railway transport; during the work of this parts we noticed a premature deterioration. The aim has been presented a predictive model allowing the identification of the probable causes that are the cause of these premature deterioration. The results are employed for predicting fatigue crack growth in the railway axle, Also we want to present the variation value of stress intensity factor in different positions of elliptical crack tip. The modeling of axle in performed by the SOLID WORKS software and imported into ANSYS.
Keywords : crack growth, static load, railway axle, lifetime
Conference Title : ICRE 2017 : International Conference on Railway Engineering
Conference Location : London, United Kingdom
Conference Dates : September 21-22, 2017