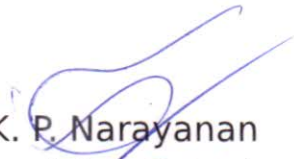


**CERTIFICATE**

This is to certify that the thesis entitled "**EXPERIMENTAL AND NUMERICAL INVESTIGATIONS ON FRICTION STIR WELDED AND FRICTION WELDED JOINTS OF ALUMINIUM ALLOYS AND STEEL ALLOYS**" submitted by **Shri. BAIJU SASIDHARAN** to Cochin University of Science and Technology in partial fulfillment of the requirement for the award of the degree of Doctor of Philosophy in the Faculty of Technology is a bonafide record of the research work carried out by him under my supervision. The contents of this thesis have not been submitted to any other university or institute for the award of any degree.

06 Jan 2017  
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