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Quality, Time and Cost Effective Brush Seal Manufacturing for Industrial Gas Turbines through a Reconfigurable Complete Fixture

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In the manufacturing, even though the machine centers have sophisticated machines for meeting the necessary quality of the job, the accuracy of the job setting, reduction of loading and unloading time, transfer of job to various machine centers without compromising the quality and functionality due to frequent resetting, On process inspection and rework on it if necessary are depends on the supporting equipments. The air machines which are operated either pneumatically or by means of steam or gas, need air sealing to prevent leakage of operating fuel. This research focuses on manufacturing of brush seal for gas turbines. The multiple loading and unloading of the same job at various machine centers produced some inaccuracies which lead the rejection or rework of brush seal jobs. Hence, as per manufacturing process demand, a complete fixture is designed to use universally for all manufacturing process at various machine centers and inspection also with a single setup of a job. The proposed complete fixture saves time and cost-effectively and assured quality and reliability of brush seal. The detailed study of problems and complete solution were discussed.

***Keywords*:** Brushseal; fixture; numerical study; Gas turbines