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Siemens sets innovation milestone with first 3D-printed parts for industrial steam turbine

- **3D printed oil sealing rings installed on SST-300 steam turbine of JSW Steel Ltd's at Salem**

Siemens has reached yet another industry milestone in the area of Additive Manufacturing (AM) in the power generation industry with the company's first replacement parts 3D-printed from metal for an industrial steam turbine. The company is utilizing state-of-the-art AM technology to pave the way for greater agility in steam turbine component manufacturing and maintenance and to set new benchmarks for industrial power plant services.

The 3D-printed parts are two oil sealing rings used in keeping oil separated from steam inside the steam turbine using pressurized air. The rings are being installed as replacement parts on the SST-300 industrial steam turbine operating at the JSW Steel Ltd. plant in Salem, India.

Siemens engineered, designed and developed the parts as part of a collaborative project between Siemens experts in Germany and India, as well as in Sweden, where the company operates a primary Additive Manufacturing center of expertise. Additive Manufacturing opened up new possibilities for making little changes with high impact in the design to further adapt the components to the client's challenging environment and needs. Siemens was able to add functional enhancements that could not have been made using a traditional manufacturing process.

"Siemens is a leader in additive manufacturing and is delighted to partner JSW in its continuous journey of modernization of its power assets across India. The project is a path-breaking success for the use of 3D printed parts in the field of power generation, one of the most demanding areas of application for this technology. The additive manufacturing

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technology significantly reduces the lead time to produce spare parts and will help meet high-end customized requirements of the Industry more quickly” said Prashant Jain, Country Division Lead - Power Generation Services Division of Siemens India.

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