

## **Licensing and Technology Transfer Opportunity**

### **TITLE OF TECHNOLOGY AVAILABLE:**

**“UNIVERSAL SELF ALIGNING AUTOMATED GEAR HOBGING FIXTURE”**

### **BRIEF DESCRIPTION OF INVENTION:**

The present disclosure relates generally to the field of gear hobbing system, and more particularly to an improved universal self-aligning automated gear hobbing fixture. The present disclosure is to provide a simple and cost-effective universal self-aligning automated gear hobbing fixture which can be used as a common fixture for manufacturing gears with varying root diameters. Yet another object of the present disclosure is to provide a universal self-aligning automated gear hobbing fixture for manufacturing gears with varying root diameters to reduce manufacturing lead time. These and other objects of the present disclosure will become readily apparent from the following detailed description taken in conjunction with the accompanying drawings.

### **Brief Background of Invention:**

Hobbing is a machining process for gear cutting, cutting splines, and cutting sprockets on a hobbing machine, which is a special type of milling machine. During manufacturing of the gears on the hobbing machine, the time taken for the setting of the hobbing fixture is very high. The fixtures are generally designed for a definite operation to process a specific work piece and are designed and manufactured individually. Gears of different sizes and number of teeth are manufactured as per user requirements. Whenever a gear of a new root diameter is to be manufactured, old fixture has to be removed and a relevant new fixture has to be installed along with change of the mandrel may require. The change of the fixture and mandrel leads to idle time, thus increasing the manufacturing lead time, which result increase in manufacturing cost.

There is, therefore, a need to provide an improved, simple and cost-effective universal self-aligning automated gear hobbing fixture which can be used as a common fixture for manufacturing gears with varying root diameters.

### **Describe the final product:**

The present disclosure relates generally to the field of gear hobbing system. A universal self-aligning automated gear hobbing fixture is disclosed. The disclosed fixture is based on a base; a

first support member coupled to the base; a second support member slidably supported on the base to move between a first position and a second position relative to the first support member, and a drive means configured to enable movement of the second support member between the first position and the second position along a guide way slot of the base. The second support member is configured to move between the first position and the second position for holding a mandrel with varying diameter in a predefined range between a second jaw of the second support member and a first jaw of the first support member for supporting a gear blank on the mandrel.

**Technological Domain (Keywords):** Gear Hobbing, Self-Aligning, Machining.

**Stage of Development:**

Ideation/Prototype/**Advanced Prototype**/Ready to Market technology

Provide Information on Competitors who manufacture and/or sell similar products:

St. George industries, Pune, Riya Industries, Faridabad, Haryana, SMK Turnkey Solutions Pvt Ltd, Pune

**What are the unique advantages your innovation has compared to the competition:**

- The present disclosure provides a simple and cost-effective universal self-aligning automated gear hobbing fixture which can be used as a common fixture for manufacturing gears with varying root diameters.
- The present disclosure provides a universal self-aligning automated gear hobbing fixture for manufacturing gears with varying root diameters to reduce manufacturing lead time.

A few potential companies who might be interested in this technology:

St. George industries, Pune, Riya Industries, Faridabad, Haryana, SMK Turnkey Solutions Pvt Ltd, Pune

Intellectual Property Status: Indian Patent application with number filed in (mention year)

Filed at the Indian Patent Office on **08<sup>th</sup> April 2019** as a **complete** application **201941014152**

**Proof of Concept:**



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