

## Final year project title: **Detailed analysis of jigging methods**

### **Background: Powder coating area**

Wispeco Aluminium is a dynamic manufacturing company situated in Alrode in the south of Johannesburg. Customers have two surface finishing options after the extrusion process. The two surface finishing options include a powder coated or an anodised finish. Powder Coating can be any colour depending on the preference of the customer. The powder coating plant consists of 3 automated coating lines and one manual line. The aluminium extrusions are mounted onto a moving conveyor with jigs before the extrusions run through a spray booth and into the oven.

### **Project Scope Definition**

Jigging forms an integral part of the powder coating process but doesn't really add value to the product. Jigging and off-jigging is a time-consuming process that is performed manually.

#### Tasks:

- Perform work studies and time studies on jigging process
- Identify difficult work methods
- Perform an in-depth analysis of jigging methods
- Perform an in-depth analysis of different jigs
- Link types of jigs with various profiles
- Research latest jigging methods, jig materials and jig profiles
- Research opportunity for vertical powder coating (latest technology)
- Propose various new methods and jig profiles

#### Deliverables:

- Time studies and work studies
- Detailed jigging analysis
- New technology research

Project aim: Increase productivity and throughput by decreasing time spent on jigging and off-jigging.

### **Mentorship**

Wispeco has previous experience in mentoring final year students and supports the development of young engineers in SA.

### **Project application process and contact details**

If you are interested in completing your final year project at Wispeco Aluminium in 2014 you can attend our Plant Visit on Friday the 7<sup>th</sup> of February 2014 at 8h30.

Please **RSVP** before 16h00 in the afternoon of 6<sup>th</sup> of February 2014

The address is 678 Potgieter Street, Alrode (please contact us should you require directions from Pretoria). Please bring your CV and remember to wear comfortable closed shoes.

Please contact Esbè via email: [esbe@wispeco.co.za](mailto:esbe@wispeco.co.za) or

Phone: at (011) 389 0034 or 084 584 1110