Application of Six Sigma Tools to Minimize Scratch Defect on an Automotive Door

By: Mario Puente, Reyes Automotive Group

**When:** Friday, June 7th, 2013, 11:45 PM – 1:00 PM

**Where:** Engineering Building (EB) 3.04.66 on UTSA Main Campus

**RSVP:** Contact Dr. Hung-da Wan (hungda.wan@utsa.edu) to reserve your seat.

**Presentation Summary**

This presentation will discuss a project that used several tools of Six Sigma to minimize scrap rates at an assembly door on an automotive supplier plant. Reyes Automotive Group (RAG) is a tier-1 injection molded/blow molded automotive supplier for Toyota Motor Manufacturing of Texas (TMMTX). RAG supplies approximately 60 parts and several assembled parts into their production line. During the application of the DMAIC methodology, the defect was clearly identified and monitored at the define phase. At the measure phase, a measurement system analysis (MSA) was performed together with a process capability analysis to assess the level of performance of the process. At the analyze phase, the team utilized process maps, fish bone diagrams and brainstorming sessions to identify the root causes of the problems associated with the defect; several hypothesis tests were performed as well. Lastly, in the improve and control phase, a design of experiment was completed and the controls were set to avoid similar defects. These Six Sigma tools effectively reduced the number of occurrences of this particular defect by identifying root cause of problems and developing ways to address those concerns.

**Speaker Information**

Puente currently works for Reyes Automotive Group as an Industrial Engineer. In 2006 he received his Bachelor of Science in Manufacturing Engineering from The University of Texas Pan-American. While working as part of the Operations department at Reyes Automotive Group, he also trains to be certified as a Six Sigma Black Belt (SSBB). Puente attends The University of Texas at San Antonio in the Advanced Manufacturing and Enterprise Engineering program while working fulltime. This simultaneous work and study allowed him to understand the Six Sigma methodology from the front line and learn the Toyota Production System.

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