Go or No Go Work Area 9

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Part I: Overview of Workplace

GMT Corp located in Waverly, IA. The company is a machine, welding and assembly shop that employs several hundred people. GMT brings in large steel castings then machines, welds, and assembles these parts and sends them to other manufacturers such as John Deere, Caterpillar, and other large manufacturers of heavy equipment.

Part II: Workplace Focus

There are many work areas on the production floor at GMT.   They all have tools, various machining centers, and production processes they perform on steel castings. Each area have staffing, safety, quality, and production goals each 24 hour period. One particular work area is called C09.

Part III: Introduce the Project or Problem

Work Area C09 is typically utilized as a training area for new employees. In order to move from the area, an employee will have to pass certain tests. The student's challenge will be to try and pass a test based on taking correct measurements and deciding if the part is in specification or not, using the part drawing as comparison. The term used in industry is 'Go or No Go' meaning the part is 'Go' if it meets the customer's specifications.

Part IV: Standards, Driving and Essential Questions

HS-ETS1-2 Design a solution to a real world problem by breaking it down in smaller, more manageable pieces.

Which measurement tool will you use? Does the measuring tool measure in the correct units or do you have to convert? How many times will you measure the part?
How many different team members will measure the part?
Will students use any statistical data to help prove or disprove validity of results?
What is the team's final decision on each part? Go or No Go of the part?

Part V: Extern Host Role

Provide a total of 10 identically looking parts, along with part drawings, where a certain characteristic of the part may be in tolerance or not.   The challenge will be to

Part VI: Design Elements Checklist

Can you document these elements?
1. Challenging Problem or Question
   Present the challenge with 10 identical parts
1. Sustained Inquiry