The White Polymer Case Study

This is an applied course in industrial problem solving. So you won't learn a lot of theory or see a lot of complex formulas. Instead, you'll see several case studies to help you understand how the different methods can be applied to solve real-world problems.

In this module, you have been introduced to the Anodize case study. A second case study, which we revisit again periodically throughout this course, is the White Polymer scenario. We use this case study as a vehicle for introducing many of the concepts, tools, and techniques that you will learn.

Here's a little background. MoldMat Limited manufactures granulated white plastic at a plant in Britain and supplies it to a molding plant in Italy. Here it is made into white garden chairs and tables.

However, the molding process goes through intermittent phases when the quality drops. This leads to yield losses at both the polymer and molding plants.

When a crisis occurs, teams are formed to tackle the problem, but the problem usually disappears for no apparent reason. You are a process engineer, leading a team that will try to solve this problem, once and for all!

Early in the project, your team develops a problem statement. You learn that this is an extremely expensive problem, which is causing a serious loss of revenue. You work with the team and your project sponsor to establish your project goal.

Your goal is to increase the average yield of white polymer from 88% to 95% or higher by March xxxx (a four-month time frame). Your KPI is daily yield, which will be plotted using a control chart.

We return to this case study in some of the upcoming modules. In the next module, you learn about the white polymer process, about data that has been collected, and how to explore these data. If you want to read this case study in its entirety, you can download the case study from the Read About It for this module.

Note that many of the details of the case study are highlighted in the file White_Polymer.jrn. This file, which is in the course data folder, is a JMP journal. We can open this journal in JMP, and click on the gray disclosure icons if you want to take a sneak peek at the steps the team took to solve the problem. You learn about using JMP journals in the next module.

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