

ICQCC 2011-Yokohama

1. Reducing Shrinkage Failure of Adhesive on Grip
Reducing Time Required for Quality Checks in Subsequent Processes

2. First Club Circle

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8. Abstract (approx. 400-500 words)

Our circle has pursued activities with tenacity while adding new technical members based on its motto of “Valuing every customer, valuing every work process, and practicing heartfelt hospitality” and its policy of “Following through on every task based on the ‘three reals’ philosophy (real places, real parts, and reality), investigating issues more thoroughly, and conducting activities that inspire satisfaction on the part of the next process.” In selecting our theme, we narrowed down the candidates to those issues that inconvenienced the next process from the standpoint of our circle’s motto of “practicing heartfelt hospitality” and conducted a detailed investigation of the need for extensive checks for adhesive shrinkage defects in grip sub-assemblies. As a result, we found that (1) the next process spends 30 minutes of overtime work dealing with defects and (2) the high defect rate of 47% was causing workers to make manual fixes on a daily basis. Accordingly, we chose reducing grip adhesive shrinkage defects as our theme and reducing the amount of time spent checking for defects in the next process as our sub-theme. More specifically, we established goals of lowering the defect rate from 47% to 0% and lowering the defect inspection time from 30 minutes to 0 minutes. Our reasoning was that even a single defect inconveniences the next process. A series of efforts to analyze causes, verify findings, and implement corrective measures led us to conclude that there were three major causes of the defects. First, different workers were using different methods to wipe up adhesive. Second, different workers were applying different amounts of adhesive. Third, the adhesive being used had low viscosity. We decided to take action to address these three causes. To address the first cause, we quantified the amount of force to be used in wiping up adhesive. To address the second cause, we quantified the amount of adhesive to be applied. To address the third cause, we changed the adhesive being used. These three measures allowed us to achieve our goal of reducing the defect rate to 0% and the defect inspection time to 0 minutes. Secondly, they also yielded annual savings of ¥1.06 million. We incorporated the measures into standards and work guidelines to prevent any recurrence of the issue in the future. Through this activity, we were able to delve deeply into the problem by involving technical members, and we were able to extend heartfelt hospitality to workers in the next process by following through on our task.

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①グリップ接着ヒケ不良削減

～後工程の良否確認時間削減～

②ファーストクラブ

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⑧発表要旨（800字以内）

『1人のお客様を大切に・1つの作業を大切に・心を込めたおもてなし』をサークルモットーとし『3現主義に徹し、最後までやり遂げる・問題に対してもっと深堀をする・後工程に喜んでもらえる活動にする』を方針に掲げ、更に今回の活動から技術メンバーを新たに加え、深堀にこだわって活動を進めてきました。テーマを設定するにあたり、サークルモットーである「心を込めたおもてなし」の観点で、後工程へ迷惑を掛けている問題に絞りこみ、「グリップ部組の接着ヒケ良否確認が多い」について詳しく調査を実施しました。結果、①後工程が不良により30分残業となっている。②発生率が47%と高く、毎日手直しを実施している事が解り、テーマを「グリップ接着ヒケ不良削減」、サブテーマを「後工程の良否確認時間削減」としました。目標は、不良発生率を47%から0%に削減、良否確認時間を30分から0分と設定しました。理由は、1個でも不良が発生すれば、後工程に迷惑をかけてしまう為です。要因解析・検証・対策を繰り返し、不良の主な要因は3つである事が判明しました。要因①：人により接着剤のふき取り方法が違う。要因②：人によって接着剤の塗布量が違う。要因③：接着剤の粘度が低い。以上3つの要因に対し、対策を実施する事としました。対策①：接着剤の拭取り力量の数値化。対策②：接着剤塗布量の定量化。対策③：使用接着剤の変更。以上3つの対策を実施し、不良率0%、良否確認時間0分の目標を達成する事が出来、副次効果として、年間106[万円/年]の効果金額となりました。また、対策内容を標準書、作業要領書へ展開し、再発防止としました。今回の活動を通し、技術メンバーを巻き込んだ事で問題に対する深堀りが出来、最後までやり遂げた事で後工程の方々に心を込めたおもてなしが出来ました。