事例研究

DFSS導入による効率的技術開発プロセスの構築

Establishing an Efficient Technology Development Process through Implementation of DFSS

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Our company conducts research based on technology seeds. Once we have established a technology, our next step is to transfer it to Isuzu Motors, but sometimes technologies that do not match Isuzu's needs end up being discontinued without being used. We thought we might be able to improve the chances of having our work adopted, even from the basic research stage, by using the Design For Six Sigma（DFSS）approach with a task-achieving narrative. This would also be a way for us to work on research themes tuned to the needs of the world. The goal of our research is to develop a next-generation system for recovering waste heat from a low-temperature heat source. To give our research a clear direction we applied DFSS to the development of technology for recovering heat from a next-generation low-temperature heat source. We also deepened our understanding of volatile organic compounds（VOCs）. In this way were able to clarify subject matter to be evaluated and set evaluation standards for research results. In addition, even at the initial seeds stage, we were able to obtain research results that matched needs, and convince Isuzu Motors to make use of them. We also expected that by designing parameters from an energy perspective, we would be able to ensure reproducibility in the field. As a result of all the above, the activities of the Institute have become more efficient and effective than they were before.

Key words：DFSS, quality engineering, Taguchi methods, S/N ratio

1. 背　　景

当社では，技術シーズを基に研究テーマに取り組み，技術が確立された時点で，いすゞ自動車(株)の開発部門へプレゼンテーションを行い，レシーバ部署を決定し技術移管のステージに移行する。しかし，ニーズにマッチしない技術は，採用されずに終了してしまうこともある。そこで，新製品および新サービス開発指針である課題達成型ストーリーのデザイン・フォー・シックスシグマ[1)]（以下，DFSS）を用いて，基礎研究段階から高い確率でレシーバ部署のニーズとマッチさせる技術開発のプロセスの構築のための研究に取り組んだ。

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