

National Engineering Industries Limited

主査コメント

Lead Examiner's Comment

圓川 隆夫(東京工業大学名誉教授)

Dr. Takao Enkawa, Professor Emeritus

Tokyo Institute of Technology

NEI社のTQMモデルの特徴

- デ賞後、バリューチェーン全体を視野に拡大した6本柱に：Customer Focus, Process control & Improvement, Policy Management, Product & Process Design, Quality Management, Human Resource Management

Features of TQM Model at NEI

- 6 pillars, which expanded views to encompass the entire value chain after being awarded the Deming Prize : Customer Focus, Process control & Improvement, Policy Management, Product & Process Design, Quality Management, and Human Resource Management

- ITのフル活用：TQM実践の核となる方針管理における方針の策定・展開，日常管理と結び付けたレビュー（ギャップ分析の機能も備える），そして評価までのプロセスがポータル化されたiBharと呼ばれるSAPのアプリケーションシステムを開発、導入
- サプライヤーの育成と連携の強化：製品原価の50%以上を占める原材料について、サプライヤーのQCD革新のためにSCMを立ち上げ、品質向上やコスト削減、DOLによるリードタイム削減、在庫削減に大きな効果
- Extensive use of IT: SAP application system, called “iBhar” was developed and introduced to plan and deploy policies for “Policy Management”, which is a core of TQM Practice, link a view with “Daily Management”, equipped with a function of gap analysis, and monitor process till evaluation at a portal level.
- Suppliers development and strengthening of collaboration: With regard to raw materials which dominates more than 50% of product cost, SCM was launched to innovate supplier’s QCD, leading to a significant effect in quality improvement, cost reduction, lead time shortening through DOL, and inventory reduction.

Customer Focusとその基盤の強化

- CS(顧客満足度)の系統的収集と活用: 7つの顧客カテゴリー別に約30の項目からなるCSを系統的に測定、結果の責任部署にフィードバックする仕組みの整備

Customer Focus and strengthening its foundation

- Systematic collection and use of CS data: Established a mechanism to measure CS systematically with approx. 30 data items by 7 customer categories, and give feedback on results to a responsible department

- 販売・マーケティング部門におけるTQMの新たなモデル：輸出拡大と新規顧客獲得のために、顧客の対応したKAM（Key Account Manager）制度の導入：マーケティングから新製品開発，さらにplantへの生産指示，顧客への納入などバリューチェーンを俯瞰的に見てイニシアティブを取る体制が構築、うまく機能
- 1個1個バーコード（2次元を含む）を付与することにより品質保証上のトレーサビリティを確保

- New TQM Model at Sales and Marketing department: KAM(Key Account Manager) system was introduced to correspond with customers, aiming for export expansion and new customer acquisition: System to take initiative from a panoramic view of value chain; i.e. from marketing to new product development, and further to production order and delivery to customers, was established and functioned well.
- Ensuring traceability for quality assurance by attaching bar code (including two-dimensional) to each product

2020ビジョンに向けた開発力と能力強化

- 今後のビジネス拡大と競争優位を確保するために耐摩擦性ベアリングに関連した技術開発も積極的に展開.
- そしてそれをサポートする試験・測定装置やX線回折装置, SEMなどの分析機器の導入,

Enhancing development capability for Vision 2020

- Actively deploying technical development, related with rub resistant bearings, in order to ensure future business expansion and competitive advantage
- Introducing test and measuring equipment, X-ray diffractometer and analytical instrument, such as SEM, to support the above activities

- Prototype shopの増強など、開発環境のインフラ整備が行われ、開発リードタイムの半減などの効果をあげている。
- 急速な新工場・ライン（既存のJaipur, Newai, Manesar,に加えVadodara）の増強と、TQMの成果の取り込み

- Building infrastructure for development environment, such as Prototype shop reinforcement, made a significant effect in decreasing development lead time by half, etc.
- Rapidly reinforcing new plant/line (Vadodara, in addition to existing Jaipur, Newai, and Manesar), and incorporating TQM effects

4工場でのleanイニシャティブと人材育成

- TQMに加えTPM, TPSを加えたleanイニシャティブに基づきQCDの一貫した改善活動
- リアルタイムベースの実績データ収集やそれに基づく日常管理の実践.

Lean initiative at 4 plants and Human resource development

- Thorough improvement activities, based on lean initiative, adding TPM and TPS to TQM.
- Collection of performance data at real time basis, and the practice of daily work management based on it.

- マネジャーや工場長を加えたDWM (Daily Work Management) ギャラリーにおける改善に向けた情報共有
- 全員参加のQCサークルや自主保全による改善活動に加え、テーマによっては多くのCFT活動のフレキシブルに運用し改善活動を活性化
- ユニークな能力開発法 : Module Based Training と呼ぶスキル開発に加え、行動面から能力 (behavioral competency) 向上を図る自の教材を開発することで成果

- Information-sharing for improvement at the DWM (Daily Work Management) gallery, involving managers and plant head.
- Activating improvement activities by flexibly operating a number of CFT teams in accordance with the theme, in addition to activities by QC Circle and autonomous maintenance which employs total participation.
- Unique competency development: In addition to skill development, called “Module Based Training”, NEI’s own educational materials for behavioral competency was developed and bore fruit