

Fact of Expenditure Support: This work was supported by the Korean Federation of Science and Technology Societies(KOFST) grant funded by the Korean government.

Editorial Board

Editor in Chief	Jung, Uk
Representative Editors	Cho, Chul Ho (Business Administration), Kim, Yong Soo (Industrial Engineering), Lee, Min Koo (Statistics)
Manuscript Editor	Shin, Su Yeon

Editorial Board(National)

Business Administration	Industrial Engineering	Statistics
Kim, Gye Soo Kim, Myoung Soo Moon, Jae Young Lee, Don Hee Lee, Su Yol Lim, Sung Uk	Kim, Seong Jun Kim, Jae Yun Park, Min Jae Bae, Sung Min Baek, Jung Woo Son, Young Doo	Lee, Mi Lim Lee, Sang In Lee, Se Won Lim, Jae Hak Jung, Ki Mun

Editorial Board(International)

Business Administration	Industrial Engineering	Statistics
Chien-Wei Wu Yumin Liu	Myong Kee Jeong Kaibo WangKaibo Wang	Yasushi Nagata

Staffs of Korean Society for Quality Management(2020-2021)

President	Hong, Sung Hoon (Chonbuk University)
Elected President	Choi, Jeong Il (Soongsil University)
General Affairs Administrator	Choi, Jin Young (Aju University)
Manuscript Editor	Shin, Su Yeon
Address	13F, 145, Gasandigital1-ro, Geumcheon-gu, Seoul, 08506, KOREA
Journal Web site/Email	https://www.ksqm.org / email: ksqm@ksqm.org
Tel/Fax	Tel: +82-2-2624-0357 / Fax: +82-2-2624-0358



Ownership of this Journal belongs to Korean Society for Quality Management



Works in this Journal can only be downloaded and shared if original writer is clarified; you may not apply changes, and you may not use this work for commercial purposes (<http://creativecommons.org/licenses>)



This Journal is printed on recycled paper KS X ISO 9706(Permanence of Paper)
Printed on 30 December, 2020 by Copitech21 Publishing Co., Korea

品質經營學會誌

제48권 제4호

2020년 12월

目 次

目 次	/ i
CONTENTS	/ iii

연구 논문

- 다구찌 품질손실개념에 의한 다특성치 품질손실함수 도출의 분석적 접근방법 배후석 · 임채관 / 535
- 빅데이터를 위한 H-RTGL 기반 단일 분류기 분산 처리 프레임워크 설계
..... 김도균 · 최진영 / 553
- 우선부품목록 선정방안 제시 및 공용화 검색 시스템 구축
..... 윤재복 · 김시옥 · 문진규 · 홍성민 · 임호정 · 김상한 / 567

사례 연구

- 딥러닝 알고리즘을 이용한 토마토에서 발생하는 여러가지 병해충의 탐지와 식별에 대한 웹응용 플랫폼의
구축 나명환 · 조완현 · 김상균 / 581
- API 5L X65 배관의 신뢰도 평가를 위한 파열압력 분포 추정에 관한 연구
..... 김성준 · 김도현 · 김철만 · 김우식 / 597

Journal of Korean Society for Quality Management

Vol. 48, No. 4

December 2020

CONTENTS

General Quality Research

- An Analytical Approach to Derive the Quality Loss Function with Multi-characteristics
by Taguchi's Quality Loss Concept Hoo Seok Pai • Chae Kwan Lim / 535
- Design of Distributed Processing Framework Based on H-RTGL One-class Classifier for
Big Data Do Gyun Kim • Jin Young Choi / 553
- Proposing a Preferred Parts List and Developing a Search System for Common Parts
Yoon, Jaebok • Kim, Siok • Moon, Jinkyu • Hong, Sungmin • Lim Hojung • Kim, Sanghan / 567

Case Study

- A Construction of Web Application Platform for Detection and Identification of Various
Diseases in Tomato Plants Using a Deep Learning Algorithm
..... Na, Myung Hwan • Cho, Wanhyun • Kim, SangKyoan / 581
- A Study on the Estimating Burst Pressure Distributions for Reliability Assessment of API 5L
X65 Pipes Seong-Jun Kim • Dohyun Kim • Cheolman Kim • Woosik Kim / 597