Certificate of Appreciation

This is to certify that

Manik Mahachandra

has participated as a

PRESENTER

"Working Posture Analysis of Sweet Whey Powder Handling at CV Cita Nasional Warehouse Using OVAKO Working Posture Analysis (OWAS)"

in the

International Cooperation for Education about Standardization (ICES) 2018 Conference

Joint International Conference with 5th ACISE (Annual Conference on Industrial and System Engineering) & World Standards Cooperation (WSC) Academic Day

"Strengthening Industry and Engineering, Science, and Management Education through Standardization Learning"

YOGYAKARTA, INDONESIA | 3-5 JULY 2018

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ICES 2018 CONFERENCE
INTERNATIONAL COOPERATION FOR EDUCATION ABOUT STANDARDIZATION

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Co-Chair of ICES 2018 Conference

International Cooperation for Education About Standardization (ICES 2018)

Strengthening Industry and Engineering, Science, and Management Education Through Standardization Learning

Joint International Conference with 5th Annual Conference on Industrial and System Engineering and World Standard Cooperation Academic Day

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ICES 2018 Conference

Joint International Conference
with **5th ACISE**, and
World Standard Cooperation Academic Day

Strengthening Industry and Engineering, Science, and Management Education through Standardization Learning

3,4,5 July 2018
EastParc Hotel, Yogyakarta, Indonesia

Ensuring well integration, interoperability, and security is crucial in the future, where variety of data and manufacture comes as a product of the exponential grow in technology and data. This is where the standard comes as the key role to address the issue.
The International Cooperation on Education about Standardization 2018 Conference (ICES 2018 Conference) is an international forum for the exchange of ideas, knowledge, and experience on the latest development in the field of standardization and standardization education among researchers and practitioners. In 2018 ICES Meeting and Conference will be organized jointly with the 5th Annual Conference on Industrial and System Engineering (ACISE).

Conference Venue:

EastParc Hotel
Yogyakarta, Indonesia.

Organized by:

Islamic University of Indonesia (Host)
National Standardization Body
Diponegoro University

Keynote Speakers

Minister of Industry
Republic of Indonesia

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SHS Web of Conferences

Scopus

IMPORTANT DATES

Deadline for paper submission : 15 April 2018
Notification of acceptance paper : 15 May 2018
Deadline for camera ready : 1 June 2018
Author Registration : 6 June 2018
Payment deadline : 15 June 2018
Conference due : 3-4-5 July 2018

Contact and Enquiries: Dhomas Hatta F.(hatta.fudholi@uii.ac.id)

TOPICS

Track 1: Standardization and Standards Education

Development, management, implementation, and maintenance of Standards Education in the field of Industry and Engineering, Science, and Management.

Development, management, implementation, and maintenance of standards in Engineering, Science, and Management Field (Architectures, Systems, Processes, Converging Technologies, Roadmaps, Open Source, Policy, and Knowledge Transfer).

Track 2: Industrial and System Engineering

Supply Chain Management, Research Operation, Industrial Management and Engineering, Production System and Manufacture, Engineering and Quality Management, Renewable Energy, Green Technology, Work Safety and Ergonomics, Healthcare, Industry 4.0.

Full papers (up to 6 pages) should follow the template, and should be submitted through EasyChair. All papers will be peer reviewed by members of the Technical Program Committee. All accepted and presented papers will be published in the online conference proceedings (SHS Web Conference). Selected papers will published in either scopus-indexed journals or proceedings (with additional fee).

For paper submission instructions and template please go to: www.ices2018.uii.ac.id

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Non Author/ Participant

International :
USD 175
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IDR 900.000
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IDR 750.000

- First deadline for paper submission: 15 February 2018
- First notification of acceptance paper: 15 March 2018
- Author First Registration: 6 April 2018
- Second deadline for paper submission: 7 May 2018
- Second notification of acceptance paper: 15 May 2018
- Deadline for camera ready: 1 June 2018
- Payment deadline: 15 June 2018
- Conference due: 3-4-5 July 2018

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Venue

The conference will be held in EastParc Hotel, Yogyakarta, Indonesia

Contact

All questions about submissions should be emailed to ices2018@uii.ac.id

Organized by

- Universitas Islam Indonesia (Host)
- Badan Standardisasi Nasional
- Universitas Diponegoro

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Working posture analysis of sweet whey powder handling at CV Cita Nasional warehouse using OVAKO Working Posture Analysis (OWAS)

Manik Mahachandra[1,*], *Heru* Prastawa[1], and *Dhialma Yonathan* Susilo[1]

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Abstract. In this 4.0 industrial era, some material handlings are still conducted manually by human. One example is in the warehouse area of CV Cita Nasional, a milk processing factory in Kopeng, Central Java. Workers are repetitively unloading a 25 kg sack of sweet whey powder from truck to warehouse area. Therefore, this study was carried out to investigate the musculoskeletal disorders risks on that workers manual handling activity. The OVAKO Working Posture Analysis System (OWAS) was chosen to be applied in the evaluation steps. For each activity in the unloading process, OWAS score category of 3 (improvements are necessary as soon as possible) were resulted on lifting, 2 (improvements are necessary in the long-term future) on carrying, and 3 on lowering the load. Consequently, a trolley was then designed to minimize the risks. The trolley was designed based on Indonesian anthropometry dimensions. Applying this proposed tool, lifting and lowering activities were then categorized in OWAS score of 2, whilst carrying was resulted in OWAS score of 1 (improvements are not necessary). This applied study was valuable in order to minimize the musculoskeletal disorders risks on such manual material handling activity, not only in the current workplace, but also in similar situation of industries.
Keywords: anthropometry, manual material handling, musculoskeletal risks, OVAKO Working Posture Analysis System (OWAS), tool design

1 Introduction

CV Cita Nasional is one of the milk processing factory, located in Kopeng, Salatiga, West Java, Indonesia. The milk products, branded “Susu Segar Nasional”, are very famous in the community. One of the main ingredients in the milk processing is the sweet whey powder. This ingredient made of secondary product of processed cheese, which involved enzyme as the coagulation method to absorb water, generate emulsification, and result foams. Whey protein is also commonly added in the processed food to increase the nutrition. The sweet whey powder used in this factory is produced by Poland company, ordered regularly every

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Quaternary quality a medium quality that connects macro quality with micro quality

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Abstract. To construct the outlook on great quality, the concept of quality can be divided into two aspects, micro quality and macro quality at present. However, the definition of micro quality and its contents are not related organically with the conception of macro quality and its contents. So an intermediate variable between micro quality and macro quality is needed to link them together, and this intermediate variable is named as medium quality. This paper introduces the connotation of medium quality that includes the concept of quaternary quality, namely zero quality, unary quality, binary quality and ternary quality, and explains the progressive logical relationships of these four qualities. Micro quality and macro quality are cohered by medium quality organically, and thus formulates the scientific outlook on great quality.

1 Introduction

Nowadays many countries attach great importance to the quality of economic development, which is defined as development quality in this paper. Therefore, one of the most important goals for China to advance along the path of scientific development is the pursuit of development quality. Development quality, which consists of core factors including reputation, market rules, market competitiveness and brand, is the degree for economic development to meet the requirements of the whole society and sustainable development. Development quality, also known as macro quality, is one of the hottest topics in quality academia in recent years[1]. Product quality, which includes hardware product quality, software product quality, processed material quality, service quality and project quality, is the traditional research field in academia. Relative to development quality, product quality is also called micro quality. The concept of quality is divided into micro and macro aspects, and thus formulates the outlook on great quality[2]. According to the research paradigm, micro quality and macro quality shall have a logical relationship, but now this relationship is ambiguous. Quality practitioners and academia still focus on the concept of product quality, and the definition of product quality mainly based on the International Organization for Standardization (ISO), that is, “Degree to which a set of inherent characteristics fulfils requirements.” This definition can be interpreted as the degree that product characteristics conform to standards and meet the requirements of customers[3]. The formation of the outlook on great quality must be based on the combination of micro quality and macro

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Three activities to promote the development of standard professionals

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Abstract. I was involved in three projects to educate standard professionals in 2017. The first was conducted for first through third-year university students as a part of standardization education in collaboration with several universities in the west Tokyo area, and many students participated. In the second, the Japan Standards Association began a system for registering standard professionals, and prepared and implemented a training system for acquiring registration qualifications. In the third, Yamaguchi University used government funds to create education materials for instructors for standardization education. These three projects are aimed at solving the problems found in past standard professionals' education. I will report the details of these three projects as a case example of standard professionals' development activities in Japan.

1 Introduction

Efforts to educate and train standardization-related professionals have a long history, but Japan only started undertaking such efforts at a policy level in 2004. In that year, the Koizumi Cabinet formulated a set of guidelines titled the "Big-Boned Policy" (honebuto no hōshin), which highlighted the "strategic acquisition of international standards." In the same year, the government released the "Plan for Promoting Intellectual Property," which underscored the importance of bolstering strategic efforts related to international standardization.

In tandem with these policy developments, METI released in June 2004 the "Action Plan for Bolstering the Base for International Standardization Practices" and, in 2006, the "Strategic Goals for International Standardization." These guidelines stipulated two key goals: (1) Submit twice as many proposals for international standards than in the passing year, and (2) be the "core country" (the country that holds an advantageous position in the formulation of a given international standard) in as many standards proposals as Western nations. The guidelines also outlined a concrete measure for achieving these goals: "training standards experts who are internationally fluent." Tasked with examining specific strategies for how to implement this measure, the Japanese Industrial Standards Committee (JISC) established a special committee on training and education. On July 16, 2008, the committee then released its report, which became the first report in Japan specializing in

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Review on active suspension system

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Abstract. For the past decade, active suspension systems had made up most of research area concerning vehicle dynamics. For this review, recent studies on automobile active suspensions systems were examined. Several vehicular suspension types were also described to compare amongst them. From published investigations by previous researchers, various automotive suspensions in terms of cost, weight, structure, reliability, ride comfortability, dynamic and handling performance were exhibited and compared. After careful examination, it was concluded that electromagnetic active suspensions should be the general direction of vehicle suspension designs due to its energy regeneration, high bandwidth, simpler structure, flexible and accurate force control, better handling performance as well as drive characteristics.

***Keywords*:** Active Suspension, Handling Performance, Dynamic Performance

1 Introduction

Vehicle suspension main task is to separate passenger and vehicular body interactions from oscillations generated by road abnormalities whilst still maintaining continuous wheel-road contact. Currently, there are three types of automotive suspensions commonly used namely passive, semi-active, and active.

All said systems are based by either pneumatic or hydraulic operation. It was asserted that some of these suspension systems cannot fully solve automobile oscillations problem because they are very costly and lend towards vehicle energy consumption increment [1].

Active vehicle suspension systems had been in wide investigation for more than 20 years due to their promising characteristics. These systems poses potentiality of responding considerably good towards upward and downward changes caused by road inputs irregularities since the dampers as well as springs are mediated by an actuator force. Actuator in an active suspension functions to spread energy away from system and it can be operated through various kinds of controllers determined by proposed design. With correct managing techniques which could induce more beneficial compromise between driving