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TECHNOLOGY ASSESSMENT

SURACHAI INTASUWAN : A STUDY FOR INVESTIGATION OF TECHNOLOGY ASSESSMENT

GUIDELINE : A CASE STUDY ON HIGH DENSITY POLYETHYLENE RECYCLING INDUSTRIES. THESIS

ADVISORS : KASEM KULPRADIT, Ms.C., VANTANEE CHONGKHAM, Ph.D., SOMKIAT THITIPOOMDEJA,  
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In this investigation, the objective was to investigate and develop guidelines to select appropriate the polyethylene recycling technology. This was done by opinion survey research. The criterion variables were established from the opinions of 10 experts. Then the assembled variables were analysed by factor analysis method. This technique resolved the dominant factors, then rotated the axis according to quartimax method. This was done for the factors cited via the correlation between variables. Another technique noted the significance of the variables, which might differ in eradication of the variable itself. The result was chosen as the developed guidelines of appropriate technology at 5 levels. The sample consisted of ten companies, whose activities were polyethylene recycling.

The results discovered 8 guidelines for selecting the appropriate technology. First the technological aspects concerned the quality of technology, the capabilities of the technology, thereality of the technology management, the level of technology, and the potential of "carrying capacity" improvement for future technology. Second, the source of technology aspect, concerned the agreement of technology tranfer, and the reliability of the source of technology. Third, the resource aspect consisted of the availability of the local resource supplements, and the availability of raw material supplements. The economic aspect consisted of the value of the investment, and the organizational support for the investment. The marketing aspect consisted of the value of goods and the competitiveness of the goods. The public benefit aspect consisted of the public economic benefit. The social aspect consisted of community participation toward community development being hamonious with the customs of the community. Finally, The environmental aspect consisted of preventing and rectifying the impact toward the environment.

This evaluation of the technology of 10 companies discovered that every sample company's activities manipulated a "high efficiency" of technology in the appropriate manner.

This result may able to be applied as a guideline for recycling the polyethylene industry.