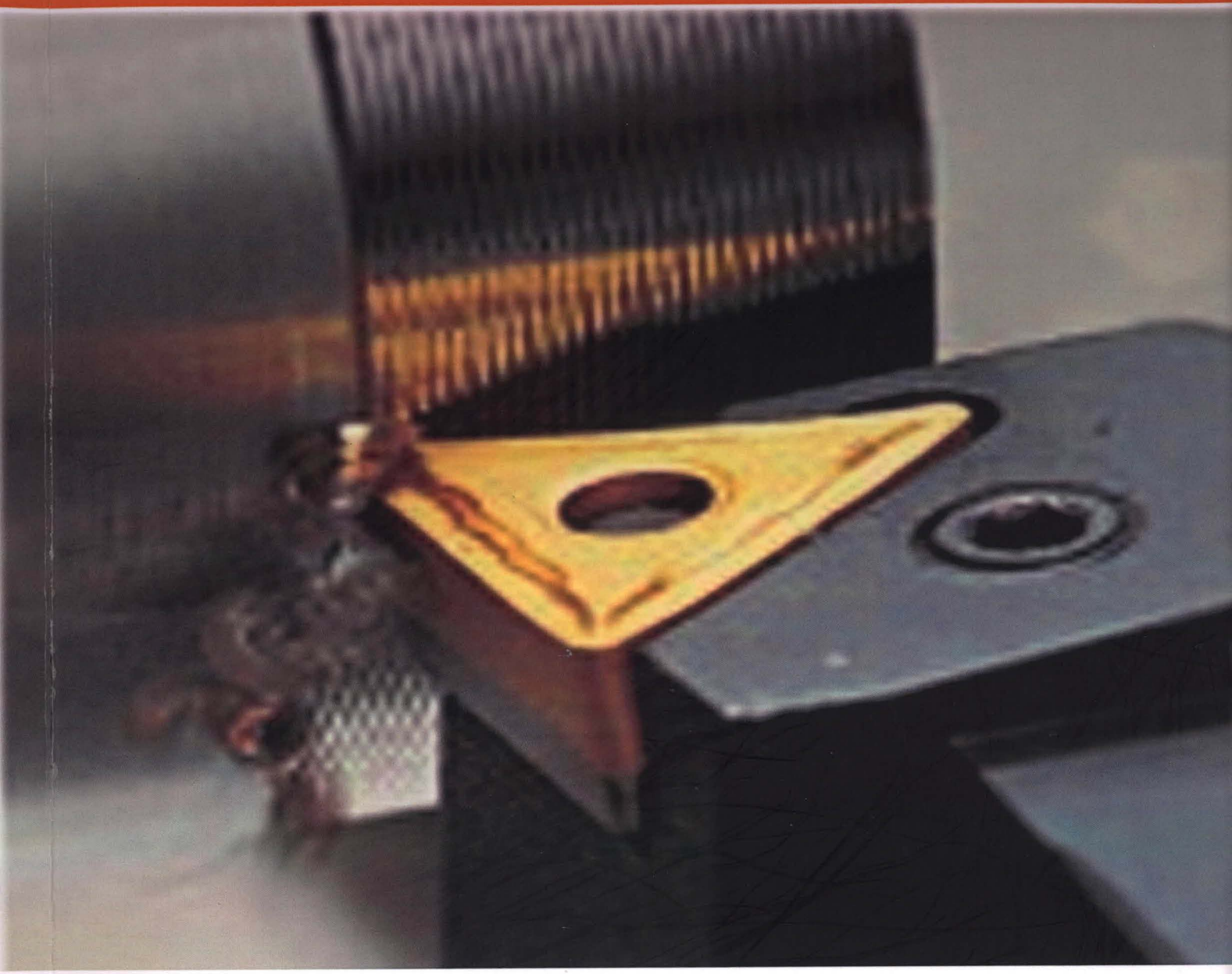

EDITOR

ERRY YULIAN TRIBLAS ADESTA

HIGH SPEED CUTTING

An Approach towards Improved Machining Performance

Manufacturing and Materials Department

Kulliyyah of Engineering

International Islamic University Malaysia

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HIGH SPEED CUTTING

An Approach towards Improved Machining Performance

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Development of Tooling Cost Model in High Speed Hard Turning

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9.1 Introduction

Cost becomes the major driver in most manufacturing fields and the most influential factor in the outcome of product, process or service within today's industries (Roy, 2003). It is the sum of money expended in terms of labor, materials and use of equipment to produce a product or service (Layer et al., 2002).

In that case, machining costs is the resources that are necessary to perform machining activities and it is related. The resources in machining are not only the tools but also operators, energy and materials.

Costs are classified in many different ways. One of the ways to classify them is variable costs or fixed costs. The variable cost elements are; work piece material, direct labor, energy and all the costs that depend on production rate or time consuming. Fixed costs are those elements of output cost which are a function of the annual production volume.

Other criteria of classification are direct and indirect cost. The direct cost is one which can be allocated to a specific part while the indirect costs cannot be allocated to a specific part (Jong, 2000).

Cost has other types of classification, these types are; recurring and non-recurring (Stewart, 1995). Recurring costs occur on a day to day basis and are also called operating costs while the nonrecurring costs are basically start-up costs and are independent of the production rate.

However, all the cost classification methods are in the bases of variable - fixed costs and direct - indirect costs. These costs are going up or down depend on what we call the cost drivers.