

Foreword

“Consideration of Technologies and Skills matching with the Times”

K. Nakatani
Executive Officer
Awazu Plant Manager
Production Division



Japan has been superior to the foreign countries in Q.C.D. of DVD player, VTR, desktop personal computer, color TV, crude steel, motorcycle, air conditioner, etc. Today, however, China has the top market share in C.D. The manufacturing industry in China looks like that in Japan at the time of Tokyo Olympic (1964) when Japan was becoming the “world factory”. At that time, however, Japan had been the world factory of ships, rolling stock, machines, etc. What is the difference between Japan at that time and today’s China in development of “manufacture”?

China has the top market share now in light electric appliances and some other products. This fact is the result of introduction of whole “manufacture”, including development and production technologies, manufacturing skills, and even production facilities and control technologies. On the other hand, Japanese, American, and European manufacturers have also been transferring the heavy industry technologies by drawings, etc. in these 20 – 30 years, but China is not the world factory at all in this industry. Why the difference was made between the manufacturing industries in Japan and China? The governments’ measures and funds seem to be a part of the cause, of course. The definite cause is, however, that Japanese excellent engineers and technicians enlightened one another and developed original technologies and skills in development, production, manufacture, control, method, etc.

Japanese technicians of one generation ago were “thinking technicians or skill groups” who digested, raised, improved, and fixed new facilities, control methods, etc. That is, the “thinking technicians or skill groups” unique to Japan outstripped the engineers and industrial goods in America and Europe where standardization was an all-purpose method. This was the same with Komatsu. Is this still the same with Komatsu now? It is true that standardization is very important. I often have apprehensions that the “thinking technicians or skill groups” are changing to “unthinking technicians or skill groups” who accept the standards without asking questions. They must molt again into “thinking and creating technicians or groups”.

How are the development and production engineers? They have been “researching and studying engineers or engineer groups” who pursued information on products, new facilities, technologies, and markets. They might be forced to do so by the times. Since the information systems at that time were not so developed as now, it was the best way for the engineers to research and check the fields, actual products, and reality for themselves. The crude information and knowledge obtained by this method aroused the engineers’ desires to research and develop and the engineers developed the technologies and products better in quality than those made in America and Europe. This is also the same with Komatsu’s engineers or technology groups, who developed the construction machinery having better quality than those manufactured in America and Europe. In the latter half of the 1980’s, Komatsu accelerated the production in foreign countries and positively transferred the technologies and skills which Komatsu had developed to the foreign countries. At that time, transfer of the technologies and skills was an important task of the engineers and technicians. As a result, the “thinking technicians or skill groups” changed to “teaching technicians or skill groups” and the “researching and studying engineers or technology groups” changed to “directing engineers or technology groups”.

Japanese people have a lot of experience in thinking and creating in the 2-dimensional world, that is, they have been drawing or projecting images of things on paper or screens to judge and create those things, from their childhood. Even if a 3-dimensional image is projected, the screen on which that image is projected is 2-dimensional, thus the Japanese people think 2-dimensionally and have less experience in making 3-dimensional things. We must observe what effects this fact will have on Komatsu's technologies and skills and we must take necessary measures against the result.

In the circumstance, the engineers and technicians must recognize the present condition correctly on the bases of reality, field, and actual things, then start new thinking of improvement. Komatsu can continue making things, as long as Komatsu's engineers and technicians keep "consideration of technologies and skills matching with the times".

While I was writing this foreword, the words of "Create, make, and sell" described by Mr. Tadashi Saegusa came to my mind. It is more important now for us, as persons engaged in development and production, to form "technology and skill groups which create, make, and sell".