



巻頭言

技術の品格

The Dignity of Engineering


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As we see in the titles of recent bestsellers in Japan such as the *Kokka no Hinkaku* (the dignity of the nation) and *Josei no Hinkaku* (the dignity of a woman), the word *hinkaku* (dignity, quality of character) is heard often today. In these cases, I believe that *hinkaku* is being used in the sense of dignity as the quality of character we should have or would like to have. Although it may all sound somewhat abstract or even sentimental, I would like to explore for a moment the idea of the quality of character that engineering should have, and by connection the quality of character an engineer should strive for.

With the frequent cases of product recalls and compliance issues in the corporate world, it is being said that these are difficult times of trial for the technical fields. Recalls and compliance issues are problems that can have a serious detrimental effect on corporations and inhibit efforts to take on new challenges in the advancement of technology. This crisis has even led to the birth of expressions like "deadlocked management" to describe a stance where corporations withdraw completely from the area of new product creation. In light of these conditions, a manufacturer like Yamaha Motor must strive to provide a corporate atmosphere in which engineers are able to pursue their inherent role of developing new technologies that will enable us to create better and better products while at the same time ensuring that we are fully responsible to society when we propose new products and also fully responsible for the products we offer from the standpoint of their quality as manufactured goods. Although the challenge to create new technologies and product quality in the broader definition are not diametrically opposed pursuits and should never be considered mutually opposed, there is an emerging dilemma for today's engineers when we are forced to consider economic factors (cost) and the risk relating to the suitability of products from the standpoint of society.

It is natural to demand a high level of quality in all of these aspects of a product, but in fact, engineers have to make decisions concerning what level of quality is acceptable in each aspect and what methodology is used to develop that quality. It is when making these decisions that the engineer's sense of ethics and what they feel an engineer should be comes into question. In other words, this is when "The Dignity of the Engineer" becomes a vital issue and a potential asset.

On the issue of quality, much debate was heard in the company lately concerning issues like ① "full commitment to local product relevance" from the standpoint of the customers and ② full commitment to a high level of quality assurance. On the other hand, there seemed to be little talk



in the area of taking on challenges to "create value that differentiates us from the competition through new technologies." I believe that, inherently, the systems for ensuring product quality should be included in the systems designed to ensure value that differentiates us from the competition.

When we think about how to pursue the challenges to create new technologies, I believe that one answer can be found in the challenge of the race activities that Yamaha Motor has pursued without rest ever since the company was founded. In the racing arena we have to use the limited resources available (primarily personnel and funds) to produce bikes that can beat the competition (product with value that differentiates us). Since all the contestants have the same amount of time to prepare their race products, the amount of resources available becomes one of the biggest determinants in a team's competitiveness. In reality, however, there are many cases where the amount of resources available does not lead directly to better or worse results.

This fact is proof of the importance of factors like the technological expertise or organizational and management skills-and by extension corporate culture-of the people or organization involved. And this shows engineers who may be struggling with a lack of resources the importance of bringing innovative measures to their challenge of developing new technologies. We are now in an age where the quality of the new technologies that bring differentiating value to products must be proven and guaranteed.

For Yamaha Motor, as a company committed to the pursuit of value that differentiates us from the competition, the racing arena—which can be viewed as an arena of product creation in its ultimate and most intense form—shows us the importance of the principles and philosophy an engineer brings to the product creation process and what an important role a respect for human perceptions and sensibilities and human emotions can play in creating value that differentiates us from the competition.

I want to ask that we all work together to realize the kind of product creation where the Dignity of the Engineer is directly reflected in the Dignity of the Product and that we work in the spirit of attaining high levels of excellence simultaneously in the two directions of "product differentiation = challenges to develop new technology" and "attaining absolute quality."

最近、『国家の品格』や『女性の品格』といったベストセラーに見られるように"品格"という言葉が耳にします。これらの場合、"品格"は"あるべき姿"といった意味で使われていると思います。少し抽象的で、また、情緒的な響きもありますが、技術のあるべき姿、ひいては技術者のあるべき姿について今一度考えてみたいと思います。

最近、多発するリコール問題やコンプライアンスの問題などで技術受難の時代ともいわれています。これらの問題が企業の経営にも大きな影響を与え、新技術への挑戦を止め、ついには物作りから撤退し

てしまうような"すくみの経営"という言葉も生まれています。ここでは、常により良い物へと新技術を開発していく技術者本来の姿勢と、新しい物を世に問う際に問われる社会的責任、我々のように製品を世の中に問う場合は製造物責任の両立が問われています。新技術への挑戦と広義の意味での品質は相反するものではなく、また、二者択一的なものではありませんが、ここに経済性(コスト)と社会適合性へのリスクを考慮した際に技術者としてのジレンマが始まります。

当然のことながら、製品としてはすべての面で高いレベルを要求されるわけですが、現実的には、どのレベルにするか、どのような方法論をとっていくのかは、技術者の判断を求められるわけです。この判断の際に、技術者としての倫理観、あるべき姿＝技術の品格が求められます。

昨今、弊社においても品質の確保といった側面では、①お客様第一主義に立脚した『現地現物主義の徹底』、②高いレベルの品質保証システムの徹底、といった議論が盛んに行われている反面、『新技術＝差別化価値』への挑戦といった側面での議論が少ないように思います。本来、品質保証のシステムは、差別化価値を保障するシステムとしてあるべきです。

新技術への挑戦をいかにして行っていくのかを考える際に、弊社が創業以来間断なく挑戦し続けてきたレース活動に、その一つの答えがあるように思います。レースでは限られた時間とリソース(主として人と金)を使いながら、競争相手より競争力のあるバイク(差別化された製品)を提供していく必要があります。時間はすべての人に平等に与えられているわけですから、リソースの多寡が競争力を決める大きな要素となりますが、現実にはリソースの多寡がそのまま成績につながらない場合が多く見られます。

この差は、技術や組織のマネージメント、ひいては企業の文化といった人的な要素が大きく働いているということを示しています。このことは、リソースの欠如といった問題に直面して苦悩する技術者に、創意工夫といった手段により新技術に挑戦することの大切さを示しています。今は新技術によって差別化価値の品質を保証することが求められているのです。

それは、物作りに対する理念や哲学、また、人間の感性や感情の尊重が差別化には大きな役割を果たしており、それをレース活動といった極限の物作りの中で常に意識して企業の文化としていくことが、差別化価値の追求を企業理念とする弊社にとっては大変重要なことです。

技術者としての品格が製品の品格に反映される物作りを目指して、『製品の差別化＝新技術への挑戦』と『絶対品質の確保』の物作りの両輪を高いレベルで回し続けるために、挑戦していきましょう。

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