

# Transition from Pure Licensing Strategy to a Portfolio of Subsidiaries, Joint Ventures and New Licenses

JOHN BURNS\*



*ABB Turbo Systems Ltd. is the world's market leader in the design and manufacture of exhaust gas turbochargers for diesel engines (>500 kw). The turbochargers are used to improve the performance of engines in the marine, railway and power generation industries. The company's turnover (1988) is some 370 million Swiss francs of which more than 12 percent is re-invested in the development of new technology. The cornerstones of the company's success have been, and still are, technical superiority (products and application engineering) top quality, worldwide after-sales networking and long-term business (license) relationships with carefully selected partners.*

## LICENSES WORLDWIDE, 1997

In 1997, the company had five active licenses worldwide and a portfolio of co-operation/business relationships that were pure licensing. At that time, the partners were Ishikawajima-Harima Heavy Industries (IHI) in Japan, Hyundai Heavy Industries (HHI) in Korea, ABB in India, PZL Rzeszow in Poland and China State Trading Company (CSTC) in China. Some 20 percent of all ABB turbochargers produced were being built under license to these companies. At present, almost three years later, the picture is quite different: Virtually all of the relationships are being

developed into a different form of co-operation. The main aim of this paper is to describe the changes that occurred during this relatively dynamic period and to discuss the rationale behind them.

## LICENSING STRATEGY

Forty years ago, the company policy was basically to maintain as big a market share as possible, worldwide, and to centralize production in Baden, Switzerland. When this was not possible, for reasons of economic policy, the protectionist stance of some major countries (Japan, Korea, China) or through the lack of production capacity required, licenses were issued for equipment to be manufactured abroad.

In fact, the first license agreement with IHI in Japan was signed in 1958 and had been running for nearly 40 years. In those early days, the establishment of the license was in direct response to the Japanese government's pressure to reduce imports. In 1997, largely through negotiations with IHI for an extension to the long running license (initially), the company became increasingly aware of the subtle, but important, natural progression of a typical license relationship.

When we analysed our license agreements, we found that they were often the only way to enter a particular market. The licensee acted as a valuable partner and provided a cultural bridge. The license allowed an extension of the life cycle of mature products for which the development and engineering effort had long since amortized. Indeed, the fear of losing control of the latest generation of intellectual property and the threat that the

license could become a competitor was not an issue. Thus, the overall risk involved with the license was minimal. However, over a period of 30 to 40 years, the risk tended to run its natural progression.

In some cases, the licensee had become more-or-less totally localized. It had developed deep and long-standing market relationships. It had mastered all the management processes and strategic decisions and was obtaining the major share of income from the market. These licensees were now insisting on latest generation products and, in some cases, has developed their own technology in parallel. Thus, the risk to the licensor has become high and, with the advent of full localization, the relationship had become more and more remote. It was because of this realization that ABB Turbo Systems developed an unwritten strategy to negotiate all license agreements into new relationships that would overcome the above-mentioned intrinsic weaknesses.

## EXTERNAL INFLUENCES

Naturally, over the three years under discussion, some pragmatic and, in some cases, external influences dictated the timing of events. In the case of Japan and Korea, the impending natural termination of existing agreements forced new strategies to be negotiated. In India, the entry of a new competitor stimulated new solutions. In Poland, the licensed product was in the end phase of its life cycle. In China, well that's probably the most complicated of the stories.

*\* John Burns is with ABB Turbo Systems Ltd, Switzerland.*

## JAPAN

In Japan, the existing license agreement terminated naturally in 1998. Negotiations extended over a long period at top levels in Japan and in Switzerland. A key factor was the introduction of two new top technology turbocharger ranges, TPL and TPS, coincident with the negotiations. Initially, ABB wanted to negotiate a new relationship and IHI wanted simply to extend the license to include the new products. A situation analysis highlighted the following main contributory factors, influencing change:

### *Licensee*

- Highly localized
- Own development capability
- Market access and contacts
- Wanted to maintain production in Japan
- Wished to extend existing license to include latest technology
- Theoretical capacity to “go-it-alone”

### *Licensors*

- More than 100 million Swiss francs investment in latest products
- Wanted to partake in local management and strategy
- Wished for equitable share of profit in relation to investment in new technology
- Wanted new, closer business relationship

ABB and IHI finally agreed to establish a J.V. in Tokyo for sales and after-sales in Japan and Taiwan. The J.V. sources its requirements from existing production in Japan and Switzerland with agreed production shares. The new technology licensed to the J.V. partners for production locally. Thus, IHI has access to new technology and maintains production in Japan. Via the J.V., ABB is able to share access to and have contact with the market and has opened the door to a more equitable return on its investment in new technology. The license agreement remains an integral element in the final business solution. Perhaps more importantly, the two

companies are building on their long-term relationship and are combining their strengths in a synergistic way. Above all, they have avoided becoming competitors.

## KOREA

In Korea, the existing license agreement with HHI reached its natural termination in mid-1999. HHI had been manufacturing approximately 100 large turbochargers per year, mostly for fitment to its own large marine two-stroke engines. In contrast to IHI in Japan, HHI was not fully localized, did not have its own turbocharger development capability and was not actively supplying licensed products to other customers in Korea. However, HHI had become one of the most important two-stroke diesel engine suppliers worldwide. The two other important customers in Korea, Samsung and Hanjung, were being supplied directly from Baden in Switzerland.

Interestingly, the situation analysis showed that the best possible solution, in contrast to the overall company strategy for licenses, would be the continuation of the license agreement with HHI. A new, much “tighter” license agreement was drawn up to include the new technology, and to withdraw sales rights in Korea from HHI apart from use on their own engines, which indeed reflected the reality of the situation before the negotiations. By this time, the end users in Korea (ship builders and operators) were insisting on the new technology turbochargers at a rate that had actually been predicted by HHI and which rather surprised ABB.

Long and quite difficult negotiations took place over a period of some 12 months, highlighting the differing cultural, managerial and business approaches between the companies. In the end, ABB reverted to an extension of the existing, less-restrictive license and both companies agreed on non-exclusive sales rights in Korea.

The final agreement allows HHI rapid access and rapid localization

of the new technology, which was being insisted upon by their customers. They have the opportunity of meeting the clear market need for engines with state-of-the-art turbochargers that continue to be manufactured in their own facilities. Through the continued license with HHI and the clear opportunity for direct contact with other Korean customers, ABB will maintain high market share in the most important market. By largely satisfying its own turbocharger needs, and through closer working relationships, HHI and ABB should be able to avoid moving along the license/risk curve.

## INDIA

The situation in India is different from any of the other licensing countries because the license is established between ABB Turbo Systems and another ABB company within the famous “Barnevik” ABB worldwide matrix. In this sense, the progression of risk associated with a normal license and discussed previously is not a driving factor for any process of change.

ABB Baroda, the licensee, manufactures approximately 150 medium-sized turbochargers per year under license, specifically for Indian Railways Alco-powered locomotives. This represents approximately 60 percent of the market, which is shared with Napier (European Gas Turbines — EGT of the UK). Both companies have local manufacturing of turbochargers. Competitive advantage is maintained by pricing policy, controlled and steady localization and effective and very active local organization for technical trials and after-sales support.

In the case of India, the entry of a new market competitor, General Electric, has become the major driving force behind changing licensing strategies and the relationship between the licensee and licensor. GE has used its knowledge and experience in diesel engine and locomotive technology as a lever to develop the turbocharger market and the relationship with the customer.

A situation analysis highlighted the following main contributory factors influencing change:

#### *Licensee*

- Single product license
- Dependent on license business for major part and turnover
- Good relationships with Indian Railways and its research establishment, RDSO
- Entry of new player
- Wanted to maintain market share with Indian Railways
- Wanted to reduce dependency on single product

#### *Licensor*

- Mother company
- New technology available
- Wanted to investigate licensee as “center of excellence” for railway applications

The response to the changing market forces and entry of a new player in the main market of the licensee was a trigger for change. The solution was to develop an integrated organization with ABB Baroda whereby the possibility of an extended license relationship is part of a broader market approach. The latest technology turbochargers will be further adapted and tested with the RDSO under a formal MOU between the RDSO and ABB Baroda. ABB will license such new technology if the market requires. It is intended to extend the capability of ABB Baroda into development and into turbocharger systems. Finally, the companies plan to integrate ABB Baroda into the global sourcing strategy of the mother company, thus reducing its dependence on the single product/customer in India.

Thus, in the case of India, the license relationship will be an integral part of an integrated organizational concept.

#### POLAND

The relationship between ABB Turbo Systems and Polish customers is long-standing, stretching back to times when the marine diesel engine industry was more buoyant in this country and the links with the

Comecon countries were quite different. Now in Poland, a license for two small turbocharger types has been running with PZL Rzeszow since 1995 and will terminate naturally in 2010. The licensee is, at the same time, a major supplier of parts to ABB Baden, Switzerland, for other turbocharger types and enjoys a good reputation for quality and delivery performance.

The licensed turbochargers are used in Poland for a rather old diesel engine type that is reaching the end of its natural life. The quantities demanded by the market and manufactured under license have fallen to a level that makes continuation questionable.

The licensee has been frustrated because market trends have prevented it from realizing the initially expected quantities. The licensor is spending more money maintaining the license than it is receiving via royalties.

The most probable solution will be to run down the license in a controlled and programmed way in close collaboration with the licensor, while increasing the prospects for supplying parts from the licensee to licensor.

The solution is consistent with the market realities and the strategy of the licensee, who has largely concentrated on component supply during the last decade. Because the transition will be achieved over a controlled period, it will be “customer friendly,” whereby alternative sources will be maintained.

#### CHINA

The first license agreement in China was signed with CSTC in 1978 and production was planned for larger turbochargers at the Zinzhong plant in Shanghai and for smaller turbochargers at a totally new site at Jiangjin in the province of Sichuan.

In 1993, the license was further extended and, by 1997, some 500 turbochargers were being manufactured per year, largely at Jiangjin.

In the period 1997 to 1999, although the license had been exten-

ded and there was no apparent reason for change, there were a number of factors that became increasingly influential in forcing ABB Turbo Systems to review its relationships in this country.

Firstly, the license actually involved three parties in China and had always been complex to administer. The influence, knowledge and management that ABB exercised in this market and the control of the companies’ intellectual property was small at the beginning of the license and had certainly not increased over the years. China was perhaps one of the few marketplaces in which ABB did little or no application engineering and therefore did not understand where the turbochargers were being applied. Secondly, the problem with infringements on the use of intellectual property, illegal manufacturing and illegal exporting had become more and more acute, to the extent that ABB was forced to temporarily discontinue the manufacturing rights with the Jiangjin plant in 1998. Thirdly, the increasing requirement to apply latest-technology turbochargers on new applications in China forced the company to evaluate how to structure a new business approach to introduce and locally industrialize this technology in a reasonably acceptable way.

A total spectrum of solutions has been evaluated and the company, which is currently negotiating a number of concrete proposals, in particular with long-standing partners, including the Jiangjin plant. One possible contender is a majority J.V. involving sales, after-sales and production in China.

The level of control will be sufficient to allow increased knowledge and contact with the market place and will allow the J.V. partners to obtain the required level of market share, largely stimulated by the right mix of new technology, market-adapted prices and local production. The Chinese partners will, within the context of the J.V., have access to new technology, applications and engineering, and worldwide after-sales — all factors that have become indispensable.

ABB will have visibility and influence within the market, will be able to control the use of the latest intellectual property and will establish the mechanism to increase total turbocharger population in this market, all of which undeniably represents a most demanding challenge. Not least, ABB will also gain access to production facilities with considerably lower production costs.

The challenge may well be met with one of the most complex of transformations from the original portfolio of pure license relationships.

#### NEW BUSINESS PORTFOLIO

From 1997 to mid-1999 — an amazingly short period — ABB Turbo Systems has transformed its portfolio of pure license agreements into new relationships in line with the overall strategy.

In reality, the transformed portfolio represents a mosaic of business solutions, which would have been hard to predict before the processes of change began.

In Japan, we have seen the creation of a sales and after-sales joint venture, a solution leveraged by the availability of new technology. In the

context of a long standing and mature license, the partners have avoided becoming competitors. Both business partners have synthesized a much closer working relationship within this difficult and competitive marketplace in which the license agreement still has its place.

In Korea, the license has been maintained as the main element of the relationship and has been extended to include the latest technology. This has been possible due to the very special and unique requirement of the licensee to produce more-or-less exclusively for its own requirements.

In India, where the licensee is part of the family, and extended license with new technology will form a part of an integrated organization and will allow a closer contractual relationship to be formed with the main customer.

In Poland, the license may well be run down in a programmed way to be replaced by an extended supply relationship.

In China, the changes will involve a joint venture with sales and after-sales, but also production in that country. One of the most challenging issues will be how to maintain market access while protecting intellectual property and preventing piracy.

#### REFLECTIONS AND CONCLUSIONS

In retrospect, while the company had an overall strategy to transform all license relationships, it is clear that there was actually no “global solution.” Each country represented a totally different mix of parameters influencing the final business scenario and each approach was “tailor-made” to the situation. However, in all but one case, the license agreement remained an integral part of the new relationship. Thus the license as a business tool has not been replaced, but integrated into a closer form of co-operation.

Throughout the three year period, a common factor emerged that has driven the processes to success. In each case, the parties strove together to build upon the energy and investment of the original licenses and to form solutions that fit the strategy and wishes of both original partners. In each case it was possible, with much expenditure of “blood, sweat and tears,” to arrive at win-win solutions.