

## Report on Japan by Edward Turner, MD BSA Motorcycles, September 1960

As a result of the tremendous growth of the Japanese motor cycle industry and the world-wide repercussions on our industry it was decided that I should pay a visit to Japan to see first-hand what is going on, to examine if possible their organizations, to visit the principle factories, to observe manufacturing methods, to discuss with Japanese Managements their plans, particularly as regards (to ed.) export and obtain as much information as possible on the Japanese motorcycle industry in order that we should be fully informed of the situation and be in a position to plan counter measures to try and preserve our won share in the motorcycle world markets.

I had previously examined one or two of the better Japanese products such as Yamaha Honda and Suzuki, and formed a very high opinion of their design, finish and manufacturing accuracy, but no impression I had gained of the obvious upsurge of this important industry in Japan bore any relation to the shocks I received on closer examination of this situation on their home ground. The revelations of Japan as a whole are truly shocking and I am amazed that more has not been published in those British national newspapers purporting to keep the public of this country informed of world developments.

Japan has 90 million highly intelligent very energetic, purposeful people, all geared to an economic machine with an avowed object of becoming great again, this time in the world of business and industry, and nothing apparently is going to stop them. Tokyo with its population of 11 millions, the largest city in the world is entirely Western and the streets are crammed with well-dressed, well-behaved busy people. Its traffic congestion composed almost entirely of Japanese cars and motorcycles is as bad as in any other city of the world but over a much greater area, and the shops and great stores are filled with an infinite variety of goods, all of the highest quality.

At the outset one must discard the old concept of Japanese manufacture being a cheap imitation of that of the West. To-day with Japanese manufactured goods of all types the accent is on qualities. They are fully aware of the reputation they have to live down and for many years now the finest machine tool equipment, techniques and scientific ability and keen commercial enterprise have been applied to this end.

Japan to-day is the largest manufacturer in the world of motorcycles, all of excellent quality. One company of this largest national producer of motorcycles produces more motorcycles than the whole of the British Industry put together and this is only one of the 20 or more motorcycle companies in full operation. They are producing well over half a million motorcycles a year (against 140,000 British), of which Honda produces approaching a quarter of a million, with 5 other companies each producing more than 25,000 units a year.

The production of motorcycles has been accelerating so fast that it is very difficult to obtain up-to-date figures of the current output. The reason for this tremendous

upsurge in motorcycle manufacture (which, incidentally, has been occurring in the ca=era, radio and domestic appliance industries with equal intensity and similar rates of acceleration) is the very high standard of living enjoyed by the Japanese population to-day, brought about by the peculiar living conditions in Japan, where personal overheads are low, and although wages are also low by our standards the margin for spending is probably greater than in our own country. The motorcycle business is exactly suited to the improved conditions of young Japan and young Japan regards a motorcycle, purchased mostly on installments, as being a desirable acquisition from a transportation point of view and gaining "face". Also Japan has become since the war very much a mechanical and technical nation. The great wealth that poured into Japan as a result of Occupation and the relatively small proportion of the Budget being devoted to Defence until recent times, together with the very liberal approach to industry of Japanese financiers, have been of course major causes for what can only be described as a phenomenon.

I see the Japanese to-day combining the intense conscientious thoroughness and meticulous attention to detail of the German, with a very open-handed uninhibited approach to sales of the most blatant American sales corporation. This combination, together with a restless energy and a national sense of purpose, has had spectacular results in the nation's economy. Of course there have been casualties and in the motorcycle business many firms have gone under and many more are likely to follow. I see clearly the bigger fish swallowing the smaller ones and although I would not be surprised to see less than 10 motorcycle companies in existence in three years' time, 4 or 5 of these 10 will be immensely powerful.

The speed with which the Japanese motorcycle companies can produce new designs and properly tested and developed models is startling and the very large scientific and technical staff maintained at the principal factories is of course out of all proportion to anything ever visualised in this country or for that matter in the United States. Honda alone, the largest company, has an establishment of 400 technicians engaged in studying new manufacturing techniques, new designs, new developments and new approaches. The whole of the technical and scientific force of Japan which enabled them, without help, to put up such a considerable show in the last war and a whole new generation of young scientists seem to have flocked to the motorcycle, motor car and electronic industries, and unlike our own country there is an enormous pool of well-trained brains to be had at nominal cost.

Wages of course are, by our standards, very low. The Yamaha Company for instance, which is an old established musical instrument firm making pianos, harmonicas, etc., were not in the motorcycle business five years ago and their progress is dramatic in that they have a well-equipped factory twice the size of Triumph with a first-class product and are currently making over 80,000 units a year. They pay only £10 per month, reckoning 1000 Yens to the £. Honda pay rather more and would average £15 per month, but it should be borne in mind that their system is different from ours. The work-people live in company-owned houses and pay less than a dollar a month rent and buy food at cost.

On the other hand there is no question in Japan of laying off workpeople. When an industrial enterprise employs people, it keeps them on the payroll through good times and bad, but the disadvantage of this situation for them will be apparent only in bad times. There are still two to three million unemployed in Japan, notwithstanding its very busy economy. The newspapers claim this figure but the Government only admits to 300,000, but all appear to be prosperous in the outlying cities through which I passed on the way to Hamamatsu, which is one of the big motorcycle centres some 250 miles from Tokyo. I noticed particularly people waiting on the railway stations as I passed through; they were well dressed in Western style and seemed to be more prosperous than the people of many provincial towns in this country to-day.

I visited the Yamaha, Suzuki and Honda factories, was well received and shown anything I cared to see. My sponsors, the Triumph distributors Messrs. Mikuni Shoko are a Japanese company with a hook-up with Amal in this country, and apart from the relatively unimportant side of their business of handling imported motorcycles, they are large carburetor manufacturers supplying carburetor's to the motorcycle and motor car industry in quite a big way.

They assigned their Import Manager to look after me during my journey but unfortunately he spoke only limited English and therefore, I was at some disadvantage in going into real technicalities or any subtleties of polite conversation. On the other hand, I felt I had the advantage of a better reception by being in the company of a Japanese. During the time I was away from Tokyo on these visits, I stayed in Japanese style hotels which though elegant and interesting, are by Western standards not the most comfortable in the world.

**YAMAHA:** At their factory I saw a shop floor scene not very dissimilar from Triumph but with far more movement, particularly of components, a certain amount of mechanisation and a high tempo of good quality and apparent enthusiastic effort. Machine tool equipment was first-class and new.

In common with the other two factories I visited 85% of the machine tools were Japanese made and the odd 15% were split up between German, Swiss and American. The only piece of British equipment I saw used was Sykes gear cutters, of which they spoke highly.

**Suzuki:** The Suzuki factory, reputed to be the second largest to Honda, was previously engaged entirely in the manufacture of weaving machines looms, etc. and went into the motorcycle business after the war with great profit. The principals had visited Triumph in this country which put me on rather a better basis for discussion. They were courteous and willing to discuss any aspect of their business with me. Their factory was even more mechanised than that of Yamaha and very self-contained, making its own castings, forgings, presswork, etc.

HONDA: The last factory I visited was Honda. This particular factory was only three years old, up to the minute, being windowless, air-conditioned and designed specifically for the purpose of efficient motorcycle production. The Hamamatsu factory is one of two, the other being outside Tokyo with a third in process of being built and equipped at the cost of over £6,000,000. The chief of operations at Honda was Mr. Honda the younger brother of the President, who was very pleasant, frank and courteous. Mr. Honda expressed great respect and admiration for the British Motor Cycle industry and felt that though some of our products were old fashioned, he was not deceived by this as he thought the "C" Range of Triumph (350c.c./500 c.c.) were equally up-to-date in comparison with anything being made in Japan. This is our latest range introduced three years ago.

The Honda factory was everything that one could desire as an up-to-date manufacturing conception for motorcycles, and although nothing I saw was beyond our conception or ability to bring about in our own factories, it should be borne in mind that we have not now nor ever have had, the quantities of anyone product which would justify these highly desirable methods being used. They had a large number of single-purpose, specially designed machine tools which reduce labour for any large component, such as the crankcase, to an absolute minimum. All components except very small ones such as gear shafts and gears more conveniently transported in trays, were moving on conveyors throughout the factory. Every section for the small, medium and larger motorcycles being made was geared to a time cycle, all assembly was on moving bands. Paint and chrome was of high quality from automatic plants. The chrome, though not as good as we produce in our industry, was apparently entirely without polishing, being coppered nickel and bright chrome on all the large components, with quite tolerable finish. The surface finishes of machined parts and standards of accuracy were, I should think, better than our best work and most complex and elaborate equipment was used throughout on gauging, all developed in Japan.

Although their wages are roughly speaking a quarter of ours, they were nevertheless extremely economical in the use of manpower. Apart from assembly I saw very little handwork except for the odd brazing of castings to ensure they fitted spotting fixtures without trouble.

Engine and machine assembly was moving and all the components seem to go together consistently and without difficulty, as indeed they had to in order to maintain the timed stations.

Testing in all factories was done on rollers geared to brakes which gave horsepower readings while the machine was stationary. A final run round the test track within the factory seemed to suffice to ensure the roadworthy standards.

Packing of various kinds was very slick, with numerous tracks coming and going to take away the merchandise.

The whole was a dynamic experience and a somewhat frightening spectacle.

The capital investment in these factories is of course enormous and they are all self-contained making their own iron and aluminium castings forgings and, particularly, pressings. Their tool room was very large, well manned and extremely busy, with elaborate and brand-new press equipment.

There was no colour variation as far as I could see other than chrome and black but one or two specials were made for racing purposes in batches of 20.

They told me that they could see a reduction in the rate of acceleration of output for the home market and that they were, therefore, concentrating more on world markets.

When I returned to Tokyo finally a meeting was arranged by Messrs. Mikuni Shoko, my hosts as it were, for the Trade, Press and one or two University professors to meet me and I was asked if I would submit myself to questioning after giving them a short address on the purpose of my visit. I naturally agreed to this and a highly placed official of practically every principal company attended, together with the national and technical Press and one or two scientists including the President of the Tokyo University. They paid me, as a representative of the British Motor Cycle Industry, considerable respect and were kind enough to say that they acknowledged the great work that the U.K. had done during the last 50 Years in the Motor Cycle Industry. They felt, however, that Japan afforded a unique opportunity for the Motor Cycle Industry by virtue of the substantial prosperity now being enjoyed and the great interest of young Japan in mechanical transportation.

It should be borne in mind that the Motor Car Industry in Japan also is enjoying a great boom and to give some idea of their approach, an Austin car is being made under licence in one factory (Toyota) and selling only 500 a month but they have duplicated the complete automation of Longbridge even for these quantities, and I am bound to say the product is even better finished than that of this country. It should be clearly remembered that Japan is no longer copying Western products, apart from odd examples such as this. They are designing from first principals on the most scientific, logical and commercial basis and the whole gamut of so called Western manufactured products in the automotive, electronic and domestic appliance fields is being pursued on an entirely original basis with many new techniques and inventive approaches. I understand the optical business, for which Germany has long been famous, is far surpassed both in quality and price by Japan, and in radio it is well known that they lead the world for price and quality in the transistor field, tape recorders, etc.

It may appear by this report that I am inclined to emphasise and exaggerate but I am purposely avoiding any form of exaggeration. It is essential that our industry in general and the B.S.A. Group in particular should know the facts and what we are up against in the retention of our export markets. Even our home market for

motorcycles will be assailed and although personally I do not think the Japanese Motor Cycle Industry will eclipse the traditional type of machine that the British motorcyclist wants and buys, they are bound to make some impact on our home market by virtue of the high quality of their product and low prices.

Having familiarised myself with the situation as it exists I have been giving considerable thought to what we might do, and a course to pursue to combat this situation, and I must confess that these answers are going to be hard to find. In the first place it should be borne in mind that the Motor Cycle Industry has never been big business in Britain. Its safety has to some extent been that it has never attracted big capital and big enterprise. We have never made to date, even in these relatively boom times, 1,000 units of anyone product in a week consistently, whereas many factories in Japan are currently doing this in a day. It is true that many of the large quantities in Japan are on small motorcycles but even the larger ones (250c.c. / 300 c.c.) are being turned out in quantities in excess of any equivalent model in this country and, therefore, it has never been feasible - and certainly not economically sound - to lay down manufacturing lines fully mechanised with complete single-purpose machine tool equipment of special design at every stage of manufacture.

Experience has shown that the British Motor Cycle Industry and our many export markets abroad want a range of motorcycles from each manufacturer. It may well be that we have not had the courage to reduce our variety of manufacture so as to produce larger requirements for any given model but previous attempts in this direction have always led to a reduction in overall turnover. Therefore, with Japan they have the manifold advantages of a large requirement for a single, developed article and they have had the great courage to invest enormous sums of money with full confidence that their products will be purchased in sufficient quantities at home and abroad, and currently they are in full flight and are receiving snowball advantages from their enterprise.

I pointed out to the meeting that Britain having opened up its doors to Japanese motorcycles, it is only fair that Japanese Trade should agree to similar measures for British machines and in any case, as far as I could see, they had nothing to lose. Although this remark registered and there is some talk of liberalising British imports of motorcycles next spring, it is not thought by our importers that this will happen and even if it did, in my judgment it would not result in the British Motor Cycle Industry participating significantly in the large Japanese home market owing to a very large price disparity- My thoughts are entirely directed towards the preservation of our existing export markets on which our companies depend to the tune of from 30% to 40% of our output (Triumph 49%, B.S.A. 35%, Ariel insignificant abroad as yet).

One of the most practical thoughts in this present situation would be to visualise opening up our own motorcycle operations in Japan, thereby obtaining the full advantages of their plentiful and cheap labour and having available a window for observation on the Japanese Industry. We might even, should we consider this,

obtain technical help which is not to be despised, particularly in regard to our future tooling and development.

By and large the menace of Japanese motorcycles to our own export markets is that they are producing extremely refined and well finished motorcycles up to 300 c.c. at prices which reach the public at something like 20% less. The machines themselves are more comprehensive than our own in regard to equipment, such as electrical starting, traffic indicators, etc. . are probably better made but will not appeal to the sporting rider to anything like the Same extent as our own. However, they will make very big inroads into the requirement for motorcycles for transportation.

On scooters, due to the poor roads of Japan which follow a pattern of being relatively good surface for reasonable distances terminated by a series of very bad potholes, the smaller wheeled scooter is not gaining favour. There are, however a number of quite good scooters made but I do not regard this aspect as being too serious at this stage.

Caption: "The whole was a dynamic experience and a somewhat frightening spectacle."