

# A Man of Steel: R. K. Markan



**A** man who knows where his mind is, and his passion for delivering things, has made R.K Markan, CMD, H&K India, one of the most sought after man in the steel industry. His passion for introducing efficient use of technology, which would catapult India to the forefront in steel making, was instrumental in introducing the QST Technology in the country. Even at his age, where most of his peers prefer to spend their autumn years in solitude, he is busy at his work station, forking out new ideas on how to make cheaper and superior steels. He in an exclusive interview to Sanjay Singh explains his view on how steel can be best made use of in the development of infrastructural sector, and what India should do, if it has to raise its per capita consumption of steel compared to other advanced economies. Excerpts of the interview

“ My curiosity and subsequently my anger grew because I felt the average Indian was ‘Being sold a dummy’ ”

**Q** H & K Rolling Mill Engineers was one of the pioneers in launching the QST rebars in India. Do you find this journey satisfying?

It has been most satisfying. What started as a crusade in 1984 at an introductory meeting on THERMEX QST technology for Indian industrialists in Dusseldorf during METEC has borne rich dividends today – against stiff opposition from the CTD lobby.

**Q** What promoted you to introduce the QST technology from Germany, when India was manufacturing steel in its traditional way?

India had been totally dependent upon CTD rebars for all RCC works since 1970 and that too of Grade Fe 415 of the IS Code for rebars. So, when I started visiting Germany frequently in early 1980s for discussions with H&K Germany, I was surprised to note that CTD rebars were not being used in Germany in any civil construction. On making enquiries I learnt that because of the poor properties of CTD rebars their use had been stopped since around 1972 – only a few years after

the process had been granted a patent. This naturally came as a big shock to me because only CTD bars were used in India. Surely, the big players in the civil construction and the steel industry could not be ignorant of such a development in advanced countries. My curiosity and subsequently my anger grew because I felt the average Indian was “Being sold a dummy”.

That is how I turned from being a “Wire rod mill engineer” to one concentrating on proper rebars for civil works. Fortunately, H&K Germany had signed a tie-up with the inventors of the patented THERMEX technology and H&K India was given the task of introducing it in the Indian region. That was the start.

**Q** In the initial stages, were your customers happy with this QST technology or did you find it difficult to convince them?

It surely was an uphill task to change the mindset of the steel industry to change over to Thermex QST rebars. TISCO had just opted for the other QST technology, Tempcore but were still to make a dent in the market and

the Durgapur Steel Plant of SAIL decided to go in for a QST technology for rebars. We seized this god sent opportunity. The very first bar made at DSP with the Thermex system was a perfect bar and we knew that we were on the right track. The rest, as they say, is history.

**Q What is the difference between TMT and QST bars?**

Frankly, in my opinion, there is no such thing as a "TMT" bar. For some strange reason, in India the QST rebars were labelled as TMT, an acronym for "Thermo-Mechanical Treatment" whereas neither the Tempcore nor the Thermex process uses any mechanical treatment whatsoever. Unfortunately, this phrase was given "Sanctity" because it was used in the IS: 1786 code for rebars and today the "Cancer" has spread. Globally such rebars are referred to as QST (Quenching & Self Tempering) or Q&T (Quenching & Tempering) rebars. India chooses to be different and we are certainly paying the price for this.

**Q Till date you have crossed the 130 Thermex order milestone. How many more orders you have in hand and what is your target in the next five years?**

Actually we are now very close to the 150 order mark for Thermex Systems. Going through the data over the last three to four years, we find that we have a pending order list of 20 to 25 at any given time.

**Q What are the main advantages of THERMEX quenching technology when compared to the other similar technologies used in the country?**

Frankly, Thermex has many advantages. First one must understand that there are only two quenching technologies that were granted patents viz. Tempcore and Thermex. I would rather not comment on the others being used in the country since I would not like to offend anyone. Unlike Tempcore, the Thermex QST System and technology comes along with special hardware that is critical to ensure that the quenching and self-tempering

process is correctly implemented. Each Thermex system is precisely engineered to suit the mill parameters of each specific rolling mill based on data supplied by the client. Thus, we do not run the risk of failure or resorting to "Trial and error". Actually, it takes only one bar to achieve the desired results and properties. You may be informed that we were able to start the very first Thermex System in India (at DSP), without German engineers, within one billet being rolled. Thermex technology is very precise besides being worker-friendly. The worker's only role is to ensure that water is "Switched on".

Additionally, each Thermex Licensee is subjected to third party quarterly Quality Audit – done by Structwel. Anyone who does not adhere to the strict norms laid down by the Germans runs the risk of having his Licence revoked.

The Thermex system is essentially designed to produce Grade 500 rebars as is the international norm. A Thermex 500 Grade rebar denotes a bar with yield strength of 500 to 625 N/mm<sup>2</sup> with an elongation of 16 to 25 percent and a stress ratio of 1.13 to 1.30. This is why we are surprised to find Grades such as Fe 500, 550 and now Fe 600 in the IS: 1786-2008.

**Q Many companies claim that their TMT bars are earthquake resistant. What is your opinion in this regard?**

I do not know of anyone in the whole world who can make an "Earthquake resistant" rebar. That assumes that the person claims to have direct access to "God" and so is well informed about the magnitude and depth and forces that would unleashed by an earthquake. I find it absurd and nothing but a "Marketing gimmick". I firmly believe that one should never defy nature or try to play "God". Humility has its virtues.

**Q Today, RK Markan is credited as the pioneer in introducing the QST technology in India. How do you feel about this achievement?**

Frankly, I am humbled by such words. The task was necessary for India's growth and for the benefit of its

“ I do not know of anyone in the whole world who can make an “Earthquake resistant” rebar” //

“ A lot of work remains to be done and a serene retired life, in the conventional sense, is the last thing on my mind”

citizens. Actually introducing THERMEX QST technology is not much of an achievement as it was quite a simple job. The real challenge was to change the mindset of persons in the steel industry and the civil sector. That took a lot of my time – actually all of the 25 years we have been in operation. Someone had to do it, and I feel very fortunate that “He” chose me.

**Q India's infrastructure is on a roll with the government of India (GOI) taking many steps to improve it. Do you feel is the government doing enough or more needs to be done?**

There are regular announcements made for the infrastructure sector by the GOI over the past five years and in every budget, but I must state that one is pained at the slow progress at the ground level. I am sorry to say that the actual work being done is pitifully inadequate.

**Q India is planning to expand its steel making capacity to 120–150 Million Tons (MT) per annum. Do you feel this is an achievable target?**

If you had asked me this question about seven–eight years back, I would have said that the target of 200 MT by 2020 was definitely feasible. Unfortunately, in my opinion, we have been let down by GOI policies that cater only to the urban population. We have a 30 percent urban sector with a population of over 300 million (more than USA). The aspiration from such a large population is for consumer goods such as automobiles, refrigerators, microwaves etc. These use flat steel products. The basic need in India is for long products (rebars, wire rods, structurals etc) because 70 percent of the country comes under the rural category where per capita steel consumption is less than five kg which is the same as found in the poorest of the under–developed countries. If we are keen to become a global power this anomaly has to be addressed. A balance has to be struck, and very quickly at that, if we have to avoid social unrest and greater migration to cities. This is already having a devastating effect and needs urgent attention. We have had enough

rhetoric. It is time the GOI begins to act.

**Q In your opinion what steps needs to be taken to increase the per capita consumption of steel in the country when compared to China?**

I have seen during my lifetime, China which had a per capita steel consumption and production far less than in India go on to become the largest producer of steel. From the under–developed category it is now on the threshold of becoming a developed nation (more than 250 kg per capita steel consumption). It will soon become one.

India must urgently address the aspirations of the poor 70 percent rural population instead of being swayed by the urbanites – even if it means losing the elections for the political party in power. Someone has to get his act right. We are paying a very big price for the social injustice and the undeveloped state of affairs in the rural hinterland. The red corridor is increasing its size and little time is left for corrective measures. We are already witnessing signs of the unrest across the country and the large migration to urban areas – which are woefully inadequate to deal with the same. I expect gigantic problems in the coming years unless swift action.

**Q Lastly, with your age you should be living a retired life, but still you are very active in your work. What prompts you to go on and on?**

A lot of work remains to be done and a serene retired life, in the conventional sense, is the last thing on my mind. As a matter of fact, you may be surprised to learn that amongst the numerous letters I received on H&K India completing 25 years, there is one which I treasure the most. It advised me to “Continue to perform your sterling professional service to the nation....” To me that letter is more worthy and precious than the many trophies and Life Time Achievement Awards I have received over the years from the civil associations and bodies.