

# INDIA AND CHINA CONTINUE CHOOSING PROPERZI EQUIPMENT TO SUPPORT THE GROWING DEMAND FOR ALUMINIUM ROD

During the past fifteen years, the barycenter of aluminium production has shifted, in dramatic fashion, from the Northwest to the Southeast of our planet. This concept is quite well represented in the diagram that we have thought to share with our readers and it is no surprise if you consider that India and China together represent approximately 40 % of the population of our planet.

In addition we may consider that in 2012 the aggregated demand for electric energy in China was approximately 4,200 TWh (almost 22 % of the total world consumption).

In several papers we have emphasized the concept that the sustainability of the growth of any country requires, among other things, secure, reliable and up-to-date energy and communication networks in addition to access and availability of natural resources where the availability of electric energy (EE) plays a fundamental role. Yet we have underlined the importance of aluminium rod and copper rod for the transportation and exploitation of EE.

The reconstruction of Iraq is also continuing to be a good propeller for the cable industry in Eastern Europe and Turkey. If we look at the data available for 2012, we see that the aggregated demand for rod worldwide has exceeded 6 million tons representing almost 12 % of the totality of primary aluminium. The portion of aluminium rod devoted to electrical applications is approximately 85 % whereas the remaining 15 % is utilized as complex alloys for welding applications and other mechanical applications including deox, master alloys and grain refiners. In general terms, the backbone of the electric network worldwide is still represented by the traditional ACSR (Aluminium Conductor Steel Reinforced) conductors, although the demand for AAC (Aluminium Alloy Conductor) and AAAC (All Aluminium Alloy Conductor) is growing at a steady rate.

As we know, there is also a growing demand for the sag resistant conductors (XTAI, ZTAI and similar) and for the newest ACCC (Aluminium Conductor Composite Core) where the core is made from a hybrid carbon and glass fiber and the active part is still made of EC grade, low tensile wires. Properzi supplied the first CCR Rod Line in India during the 1950s to Indal (Indian Aluminium), the first smelter in India developed in collaboration with Alcan. Similarly, Properzi delivered three CCR Al Rod Lines in China long before China entered the WTO. Starting from 2003 / 2004 the rod demand increased dramatically both in China and in India and since that time Properzi has been confirmed as the preferred supplier of equipment and technology for the most important projects undertaken by Chinese and Indian rod producers. The numbers are really amazing. In the past ten years Properzi has delivered eight CCR Rod Lines to Indian rod producers (one 5 tph Line and seven of 15 tph Lines) that equate to a total rod capacity of 730,000 tpy. In the same period Properzi has delivered eight CCR Rod Lines to China (seven 8 tph Lines and one 3 tph Line) that equate to 370,000 tpy of rod production.

The shifting of Al production centroid from Northwest to Southeast



Remark: the above are approximate numbers.

Under these circumstances the growing demand for aluminium rod is driven, first of all, by China and secondly by India, although in India things are presently a little bit slower in expectation of the forthcoming election (May 2014).

To some extent the implementation of the Electricity Act of 2003 in India and the process of massive urbanization in China has been supported by the many millions of tons of rod produced by Properzi CCR Lines. Think about this when you switch on your laptop!

*By Carmelo Maria Brocato*

**India** Population ~ 1.25 Billion  
Total Al output 2.1 Million tons

**People's Republic of China** Population ~ 1.35 Billion  
Total Al Output 19.8 Million tons