

MARKET DEVELOPMENT OF HRB400 GRADE III REBAR

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1 Forewords

Structural building industry is the pillar for national economy development where the basic material for this industry is hot - rolled ribbed bars that play a decisive role in the development of the industry. In 2002 the total consumption of bars in reinforced concrete structure has exceeded 30 million tons. Due to the rapid development of structural building and higher requirements for the performances of structural bars, grade II rebar of 20MnSi can hardly adapt to the demands that are required by high buildings for new type bars of high strength, fine performance figures. In developed countries, grade II rebar is basically eliminated. The often - used in high buildings and important construction projects are grade III rebar of 400 MPa, in some cases, grade IV rebars are coming into uses. The new developed grade III rebar of 400 MPa is the right substitute. Comparing to 20MnSi rebar, grade III has many advantages, for instance, higher strength and fine ductility, material saving, lower invests, higher aseismatic capacity. China is a country of rich vanadium resources, and the application of vanadium in low alloy steel has become widely accepted. It is adaptive to the practical situations of China to promote the application of microalloy rebars of 400 MPa grade III, and can realize to be internationalized in rebar applications. Vanadium and titanium

resources are rich in Chengde where the reserves amount to 500 million tons, exploitable for 100 years. Techniques for comprehensive utilization of these resources are advanced around the world. Vanadium product has been awarded "Diamond Prize" in Mexico International Market Research; hot rolled rebars from Chengde is a famous brand all over China. It has fine social and economic benefits. Therefore, in 1998, chairman of the board of Chengde Steel Group Co. Mr Liu Kezhong put forward in the annual meeting: Chengde shall put great efforts in disseminating the application of grade III rebar of 400 MPa 20 Mn-SiV, and will be the pioneer supplier of the up-graded hot rolled rebars.

2 Dissemination

From 1998, Chengde started to popularize the grade III rebar of 400MPa 20MnSiV. And in this year, the outputs of rebar amounted to 5000 tons. Thereafter rebar sales grew year by year: 20 000 tons in 1999, 70 000 tons in 2000, 160 000 tons in 2001, and 250 000 tons in 2002 which took 32% of Chengde's total outputs of hot rolled rebars of the year. According to statistics of China Association of Iron and Steel, total productions of 400 MPa grade III rebar amount to 1.048 million tons in 2001, including export. There are 15 producers whose outputs are over 10 thousand tons, Chengde Steel is numbering the second, sharing