KAWASAKI STEEL TECHNICAL REPORT

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Fabrication and Erection Techniques for Extra-Heavy Steel High-Rise Structure, Shenzhen Development Center, China

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Synopsis:

Heavy steel members up to 130-mm thick were used for a highrise building called "Shenzhen Development Center" constructed in China. As it was made necessary to apply high welding techniques to the fabrication and field welding of such heavy steels, weld experiments were performed and the results were applied to the construction of this project. The results obtained are as follows: (1) Newly developed one-pass method of two-electrode, consumable-nozzle electro-slag (CES) welding was adopted to the fabrication of girder-to-column connection of the box-section columns, so as to shorten the fabrication period. (2) Before starting the erection work, welding procedure tests us(mgka)8.3(yuki)JTJ(94u8.3ze m8.2(26) J5TJ94u8.20.793weldin2(26in 20.9.7(k2(of))TJ94u8.weed)3.7er

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was used for girder connections at columns, where the amount of welding work is concentrated in the shop fabrication of steel frames.

Field welding procedure tests were conducted using all and and all and all and all

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in the Shenzhen Economic Development Zone of the People's Republic of China adjacent to Hong Kong. An outline of the building statistics is given in Table 1. The building is large cylindrical high-rise building about 160 m tall and is the highest steel-frame structure in

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	Table 2 Standard proc welding of col	edure specification for CES umn-girder joint	Restraint plate (nm)	
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