Features of New High-Strength Steel Materials "550 N/mm^2 Class" for Building Frames†

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Abstract:

JFE Steel developed a new line of high-strength steel products with a lower limit tensile strength of 550 N/mm^2 for building frames using its advanced Super-OLAC (on line accelerated cooling)accelerated cooling technology. This product series currently consists of a steel plate, "HBL385," circular steel tube, "P-385," and square steel tube, "P Column G385." These products realize high strength and excellent earthquake resistance while maintaining the weldability of the conventional steel. The results of a test of members using the square tube confirmed that the cumulative ductility factor of 30, which is required in columns, can be sufficiently secured. A rolled H-shape steel, "HBL-H385," is also under development. A design trial was carried out to i

1 Introduction

[illegible]

[illegible] *Super* [illegible]

2. Features of Products

[illegible] **Table 1** [illegible] **Table 2**

2.1 Steel Plate "HBL385"

[illegible] **Figs. 1** [illegible] **2** [illegible] **Table 3** [illegible]

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[illegible] *Super* [illegible]
[illegible]
C

2.2 C c a Stee T be “P-385”

[illegible]

2.3 S a e Stee T be “P Co G385”

[illegible]

[illegible]

[illegible] Figure 4 [illegible] δ [illegible] Photo 1 [illegible]

[illegible]

[illegible]

Fig. 8 [illegible]

[illegible]

[illegible]

4. Conclusion

[illegible]