

Expansion of potential in reinforced concrete structures through the development of high strength shear reinforcing bar

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Out of concern for the damage that occurred during the Tokachi-oki Earthquake in 1968, the Japanese Building Standard Law was revised in 1981. As a result, buildings were required to resist even large displacement. The authors confirmed that reinforced concrete members reinforced by high strength shear reinforcements would increase the strength and ductility more than those reinforced by normal strength shear reinforcements. Based on these results, the authors developed the “shear strength design method of reinforced concrete members reinforced by high strength shear reinforcements” in 1985, and its practical use was approved by the Minister of Construction.

The use of high strength shear reinforcements permitted the design of high-strength, high-flexural reinforced concrete members, as well as high-rise reinforced concrete buildings with more than 50 stories.

Following in these development projects, other companies also began to develop high strength reinforcements. Recently, the scale of the high strength shear reinforcement market exceeded 100,000 tons per year, and high strength shear reinforcements are used in more than 90% of high-rise reinforced concrete buildings.

The development of high strength shear reinforcements by Kokusho, Matsuzaki, Hayashi, and Neturen Co., Ltd. has greatly contributed to the materialization of high-performance reinforced concrete members and high-rise buildings.