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**ENERGY INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

NB/T 20358.3-2018

Replacing NB/T 20358.3-2015

**Cost estimation of nuclear power plant construction project -
Part 3: Steel structure engineering for nuclear island**

核电厂建设工程预算定额 第3部分：核岛钢结构工程

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Foreword

This document was issued on 22 March 2018 by the National Energy Administration of the PRC and takes effect on 1 September 2018.

It is a NB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies when assessing a submission.

It is classified under ICS 01.040.27, Chinese classification F 02.

It replaces NB/T 20358.3-2015, which is superseded.

NB/T 20358 Cost estimation quotas for nuclear power plant construction projects, together with NB/T 20355 Cost quotas for civil and installation works of the nuclear island of nuclear power plant construction projects, NB/T 20356 Cost quotas for civil and installation works of the conventional island of nuclear power plant construction projects, and NB/T 20357 Cost quotas for machinery shift usage in nuclear power plant construction projects, jointly

constitute the series of nuclear power quota standards that support the budgeting and pricing of nuclear power construction works.

NB/T 20358 Cost estimation quotas for nuclear power plant construction projects currently comprises 16 parts, made up as follows.

Part 1: Nuclear island civil engineering.

Part 2: Nuclear island decoration engineering.

Part 3: Nuclear island steel structure engineering.

Part 4: Nuclear island process equipment installation engineering.

Part 5: Nuclear island process piping installation engineering.

Part 6: Nuclear island ventilation and air conditioning installation engineering.

Part 7: Nuclear island electrical equipment installation engineering.

Part 8: Nuclear island automation control instrumentation installation engineering.

Part 9: Nuclear island communication equipment installation engineering.

Part 10: Nuclear island anti-corrosion and thermal insulation engineering.

Part 11: Conventional island civil engineering.

Part 12: Conventional island thermal equipment installation engineering.

Part 13: Conventional island electrical equipment installation engineering.

Part 14: Commissioning engineering.

Part 15: Module and steel containment vessel fabrication.

Part 16: Module and steel containment vessel assembly and installation.

This part is Part 3 of NB/T 20358.3-2018 Cost estimation quotas for nuclear power plant construction projects: Nuclear island steel structure engineering (hereinafter referred to as this part). It was released by Announcement No. 2 of 2018 of the National Energy Administration, with an approval date of 22 March 2018 and an implementation date of 1 September 2018.

This part was proposed by the Nuclear Power Standardization Technical Committee of the energy industry.

This part is under the jurisdiction of the Nuclear Industry Standardization Research Institute.

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1 Scope

NB/T 20358.3-2018 is Part 3 of the Chinese budget quota series for nuclear power plant construction, and it prices the steel structure work of the nuclear island. This is not ordinary structural steelwork: it includes the stainless steel liner of the containment and of the fuel pools, the embedded plates and penetration sleeves cast into the concrete, the whip restraint structures that catch a ruptured pipe, the gate frames, brackets and anchorages, the box girders and portal frames, and the special coatings that go over them. The volume prices fabrication and erection for both stainless and carbon steel components, together with the transport to position and the specialised painting. Each quota item states the work content it covers, the unit of measurement, the labour hours by trade, the machine-shift consumption by equipment type, and the material quantities with their base prices, so a price is built from measured quantities rather than judgement. The volume explanation at the front gives the scope of the quotas and fourteen general provisions on what each rate already includes, the adjustment coefficients for working conditions, and the rules for measuring quantities; the chapter notes add the conventions specific to each group of items. It replaces the 2015 edition, and is used by owners, contractors and cost consultants preparing budget estimates, tender prices and cost control baselines for nuclear power projects in China.

This part specifies the quotas for nuclear island steel structure engineering within the cost estimation quotas for nuclear power plant construction projects.

This part applies to the nuclear island works of newly built and extended pressurized water reactor nuclear power units, and to those sub-items of BOP works that carry nuclear safety requirements, such as the nuclear island liquid waste storage tank building, the conventional island liquid waste storage tank building, the radioactive solid waste treatment auxiliary building, the solid waste interim storage building, the radioactive machinery repair shop and the decontamination workshop. Other reactor types and nuclear engineering projects may use it for reference.

2 Volume Explanation - General Provisions

1. This quota shall be executed together with the Cost quotas for civil and installation works of the nuclear island of nuclear power plant construction projects (NB/T 20355) and the Cost quotas for machinery shift usage in nuclear power plant construction projects (NB/T