GIANT BRONZE CAST BUDHA

2004 NOVA Award Nomination 2

Maitreya Project's 500ft / 152m bronze statue will be built at Kushinagar, Uttar Pradesh in northern India. The Maitreya Buddha statue and its throne building will provide the public with temples, exhibition halls, a museum, library, audio-visual theatre and hospitality services. All will be set in beautifully landscaped parks with meditation pavilions, beautiful water fountains and tranquil pools. The buildings and grounds of the Project will contain a remarkable and inspiring collection of sacred art. A public hospital of international standard will be built with the intention of supplementing the medical services currently provided by the government.

In both size and sustainability the statue and throne building are unlike any other monument in the world. The Project's professional partners include world leaders from India and around the world who are expert in Project management, structural mechanical, electrical, environmental, sustainable and reverse engineering, scanning, surfacing, mould making and casting.

One of the main goals of Maitreya Project is to build a monumental work of art that will serve as a constant source of inspiration and a symbol of loving-kindness for at least 1,000 years. While the conditions the statue will meet today can be easily measured, projecting data for weather patterns over the 1,000-year lifespan of the statue is much more difficult. The huge structure must withstand high winds, extreme temperature changes, seasonal rains, possible earthquakes and floods, and environmental pollution throughout at least 1,000 years. For this reason, the statue must be designed to withstand the most challenging conditions that could conceivably arise.

The computer model must be examined for wind loading, heat expansion, possible earthquakes, and extreme weather conditions. By using advanced computer software, all possible stresses can be simulated and the design can be adapted where stresses could have become too high. These software programs can depict stress levels as different colours. Extensive research has gone into developing the special alloy of bronze to be used for the outer 'skin' of the statue, an aluminium-nickel-bronze.

As the bronze “skin” will expand and contract dramatically due to daily temperature changes, the statue will require special expansion joints. These must be invisible to the observer, but constructed in a way that protects the internal supports of the statue from water leakage, erosion, and corrosion.

For technicians and engineers, the requirements for the statue are very unusual. Our last century is famous for having created the biggest of most man-made structures. The required lifespan of 1,000 years, however, influences most aspects of architectural design and material selection.

From the engineering point of view, this project is a one-time unique project due to the type and the volume of materials used. “Nakalium” being the skin material, will be used to build this 50-storied “Maitreya” statue of sitting Lord Buddha. 2500 tons of Bronze or 125 tons of nickel will be used in this project. A team of international designers and engineers is already working on details of this project.

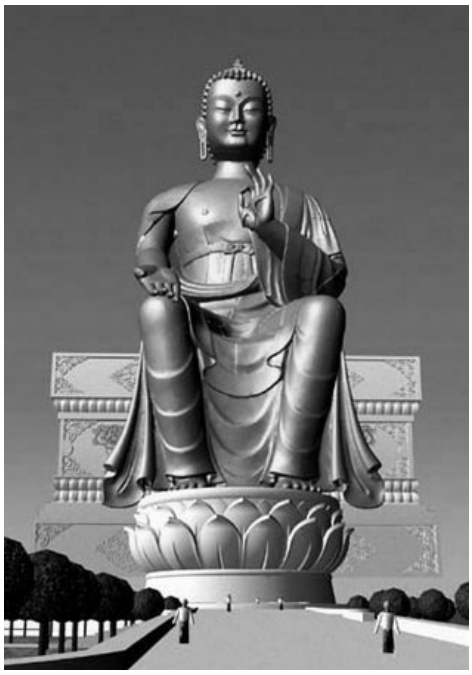
Skin Material – The skin material shall be of “Nikalium”, a nickel-aluminum bronze alloy in the form of castings. “Nikalium” is basically a bronze but technically classified under the copper alloy category. It is hard and light yellowish brown alloy.

Cast Processing – A mould pit shall be used for safety (should any molten metal escape) and for adequate working height to enable the free movements of mould. The moulds shall be in two halves, the “bed” and the “top”. Silica sand, cement and water shall be used for plaster mould mixture for good surface finish, low dimensional variation to avoid machining. After ramming the mixture in moulds, the moisture removal from the mixture shall be done by blowing hot-air into the mould, before pouring the molten metal. Large electric induction furnace(s) can be used to make the molton alloy at 1250 degrees Celsius.

Typical Characteristics – “Nikalium” is resistant to corrosion, oxidation, and wear. It has better weldability, good formability, greater thermal expansion co-efficient, higher fluidity in its molten state and a wider plastic range. It gives a best combination of strength and ductility. Its electrical and thermal conductivities are high.

Contact: Niranjan C. Bhat, Ph.D. • #4 Akash Apartments • Karve Road • PUNE-38 India • 91 (020) 543-1406 • niranja_bhal@hotmail.com • www.maitreyaproject.org

Cutaway of the 152 metre (500 ft.) Maitreya statue and throne building showing the spaces and levels within. The throne will be a 17 storey fully functional building containing 2 very large prayer halls. On the roof of the throne, stretching up into the body of the Maitreya statue, will be over 15 different shrine rooms.



Computer generated image of the completed 500-foot / 152-metre bronze Maitreya Project statue.

A glimpse from the ambulatory of the 12 metre (40 ft.) Maitreya statue within the Maitreya Gompa. The side walls will display 1,000 individual paintings of the Buddhas of this aeon.