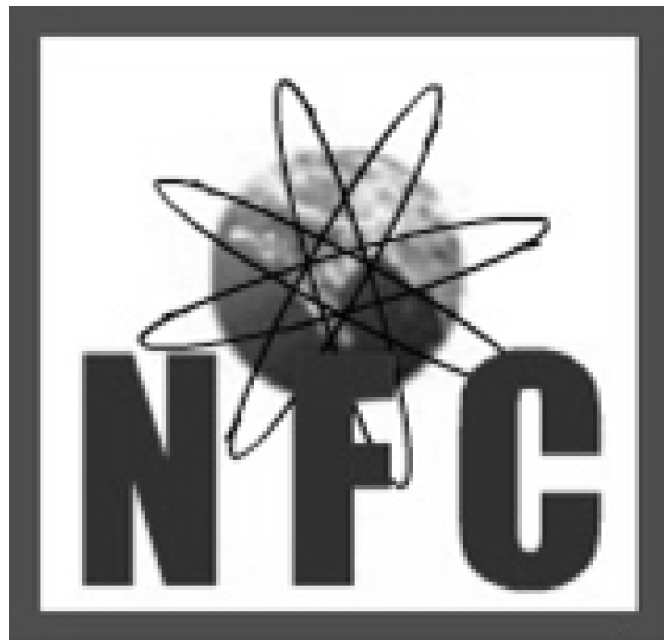

STP AHWR Machine Layout Designing

Nuclear Fuel Complex
Hyderabad

Prepared By-
JANGALA MANOJ KUMAR
ANUDEEP SUNKAR
T SAI DHEERAJ REDDY





NUCLEAR FUEL COMPLEX
Hyderabad
(Department of Atomic Energy)
Government of India
AN ISO 9001:2008 ORGANIZATION
HYDERABAD – 500062

PROJECT REPORT ON

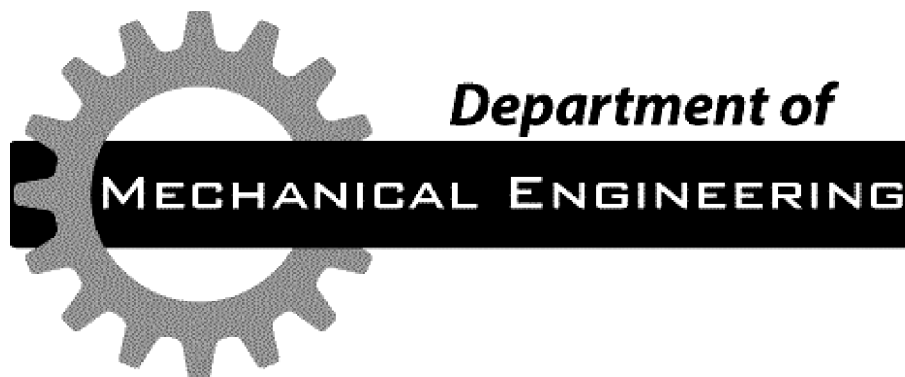
STP AHWR MACHINE LAYOUT DESIGNING

A dissertation submitted for the partial fulfilment of the award of Bachelor's Degree by

JANGALA MANOJ KUMAR - 12H61A03E7

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ANURAG GROUP OF INSTITUTIONS

GHATKESAR, HYDERABAD, TELANGANA STATE



सत्यमेव जयते
Government of India

Department of Atomic Energy

NUCLEAR FUEL COMPLEX

BONAFIDE CERTIFICATE

This is to certify that Mr. Jangala Manoj Kumar, Mr. Anudeep Sunka and Mr. T Sai Dheeraj Reddy bearing roll numbers 12H61A03E7, 12H61A03G9, 12H61A03H1 respectively from CVSR, AGI, Ghatkesar, Hyderabad have done their project under my guidance during the period from 12th May 2015 to 12th June 2015 in Special Tube Plant with reference to Nuclear Fuel Complex.

It is ensured that the report does not contain classified or plant operational live data in any form.

Place: Hyderabad

Date:

Signature

Name:

Designation:

Plant: Special Tube Plant

Approved by
The manager of the plant

Office seal

DECLARATION

We hereby declare that the project entitled “STP AHWR Machine layout” submitted to Nuclear Fuel Complex, Hyderabad and CVSR College of Engineering, Anurag Group of Institutions, Ghatkesar, Hyderabad for the partial fulfilment of the award of Bachelor’s degree in Mechanical Engineering is prepared by us and our own efforts have been poured in to make this project successful.

The part of work which had to be studied from external sources have been referred in the reference section, apart from which no part has been copied or reedited in other manner from other sources.

Candidates’ Signature

Guide’s Signature

Date:-

Date:-

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Mr. G. N. Ganesha

ANUDEEP SUNKA

T SAI DHEERAJ REDDY

ACKNOWLEDGEMENTS

We are extremely thankful to Shri N. Saibaba – CE and Chairman, NFC and Shri Phani Babu – General Manager, STP, for giving us this opportunity to carry out the project in the Special Tube Plant (STP) of NFC.

We would also like to thank the STP's Scientific Officers Shri G.N. Ganesha – Manager, Shri Utpal Singha – Deputy Manager and all the staff for their assistance throughout our project work time.

We are perspicuous to divulge our sincere gratefulness to Shri H.R. Ravindra – DGM, HRD and Dr. B.N. Murthy, AGM, HRD, Q.Cir., & QIS for helping us to do our project in NFC and conducting awareness program on DAE and NFC activities at HRD.

Our special thanks to our college HOD and Principal who have readily given the permission for doing our project in NFC.

Finally, we would like to thank all the unmentioned ones and invisible hands who helped us throughout our training.

ABSTRACT

Plant layout is a combination of both fields of art and science. It mainly involves in preparing a layout which is ergonomically sound and as well as effective i.e., reduces the traversing length of product manufactured thereby, saving the time of production.

There are basically four types of plant layout based on the manufacturing of product which are:-

- Product layout
- Process layout
- Ranking method
- Fixed layout

The first three deals with moving product across fixed machinery in the plant whereas, the latter deals with manufacturing a product which is fixed and the machinery is movable (e.g.:- ship building, etc.) but, the production of coolant tubes for PHWR reactors in NFC follows one of the first three layouts because tubes are movable.

NFC is planning to build a separate section for the production of coolant tubes for AHWR reactor which is adjacent to the existing STP plant and requires a suitable layout for machinery which was discussed above with the mentioned qualities.

The project mainly deals with study of existing plant and designing a layout for the AHWR plant which integrates with the existing and gives an estimation of the traversing length of tube and manufacturing time.

ABOUT THE REPORT

This report is the true hardship of the project done at *Nuclear Fuel Complex - Hyderabad* from 12th May to 12th June 2015. This report contains the details about the Special Tube Plant visited inside the factory and various mechanical processes going round the clock in the factory.

Report consists of a brief layout of AHWR plant which is the upcoming project of India's three stage nuclear programme to be constructed near the STP in NFC to provide the hardware for AHWR reactors, mainly coolant tubes. Report discusses about the layout of existing coolant tube manufacturing for PHWR reactors, their process time and length traversed by each tube and some disadvantages of the existing layout of machinery in plant and how it is overcome in the proposed plant layout of AHWR.

Mechanical processes undergoing in the particular plant are explained in as detailed manner as possible so that a person can understand easily by brief scrutinising of this report. At most all processes starting from the head of the plant to its tail are discussed in clear manner. Some petty areas which don't have the potentiality to make any mammoth difference in continuous chain processes in the factory are omitted in lieu of time schedule and for the completion the main project assigned.

No confidential or classified part of the factory or the plant has been discussed in this report.

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