

IFUSP **CNPq**

Conceptual design of a system of BMP tools for the TCABR tokamak

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Abstract

The first wall of the tokamak is a critical component in the design of a fusion reactor. It is subjected to high temperatures and neutron bombardment. The development of a system of Beam Position Monitor (BPM) tools for the TCABR tokamak is a challenge. This paper presents the conceptual design of a system of BPM tools for the TCABR tokamak. The system is composed of a set of BPM tools that will be used to monitor the position of the beam during the operation of the tokamak. The design is based on the use of a set of BPM tools that are adapted to the geometry of the tokamak. The system is designed to be able to monitor the position of the beam in real time and to provide feedback to the control system. The design is based on the use of a set of BPM tools that are adapted to the geometry of the tokamak. The system is designed to be able to monitor the position of the beam in real time and to provide feedback to the control system.



1. Introduction

The first wall of the tokamak is a critical component in the design of a fusion reactor. It is subjected to high temperatures and neutron bombardment. The development of a system of Beam Position Monitor (BPM) tools for the TCABR tokamak is a challenge. This paper presents the conceptual design of a system of BPM tools for the TCABR tokamak. The system is composed of a set of BPM tools that will be used to monitor the position of the beam during the operation of the tokamak. The design is based on the use of a set of BPM tools that are adapted to the geometry of the tokamak. The system is designed to be able to monitor the position of the beam in real time and to provide feedback to the control system.

2. System architecture

The system architecture is based on the use of a set of BPM tools that are adapted to the geometry of the tokamak. The system is designed to be able to monitor the position of the beam in real time and to provide feedback to the control system.

3. Conclusion

The system architecture is based on the use of a set of BPM tools that are adapted to the geometry of the tokamak. The system is designed to be able to monitor the position of the beam in real time and to provide feedback to the control system.



STUDY OF HEAT DEPOSITION ON THE FIRST WALL OF TCABR

In the modernization of the TCABR tokamak, it was necessary to improve the first wall of this apparatus. For this purpose, the MHD model will be used, which is adapted for the specific objectives of this study, around the limiter points (LP), which are the points where the plasma intersects with the wall. It is necessary to study the heat flux on the wall with computational simulation. In order to use in order to create a set of tools for the wall measurement.



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DESIGN DE UM SISTEMA DE MONITORAMENTO DE POSIÇÃO DO FEIXE

Este trabalho apresenta o projeto de um sistema de monitoramento de posição do feixe para o tokamak TCABR. O sistema é composto por um conjunto de sensores de posição do feixe (BPM) adaptados à geometria do tokamak. O sistema é projetado para monitorar a posição do feixe em tempo real e fornecer feedback para o sistema de controle.



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