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New Visible Wide Angle Viewing System for KTM Based on Multielement Image Fiber Bundle

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In the paper is described new endoscopic visualization system of KTM tokamak which allows to observe plasma through the long equatorial port. System has been designed to observe processes inside plasma and the processes due to plasma-wall interactions.

Design of KTM's visualization system based on special image fiber bundle and entrance wide angle objective lens, which allows to have image of large section of the vacuum chamber, both poloidal half cross section and divertor through the long enough equatorial port. System also consists of two video cameras: slow and fast with image intensifier.

In the design of the system had been used commercial available elements that has allowed reduce cost and decrease time of the research and development.

In the paper advantage and disadvantage of the system in comparison with conventional endoscopes based on a lens system, perspective of utilization this system on future tokamaks and future steady state fusion reactors are discussed.

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