

**INSTALLATIONS AT AND SERVICES OF ZAG ZYKLOTRON AG FOR
DEVELOPMENT AND PRODUCTION OF
INNOVATIVE, RADIOACTIVE PRODUCTS OF HIGHER QUALITY FOR
MEDICAL APPLICATIONS AND MECHANICAL ENGINEERING**

Achim Kleinrahm^{1*}

¹ZAG Zyklotron AG, Hermann-von-Helmholtz-Platz 1, Eggenstein-Leopoldshafen, 76344,
Germany,

*Corresponding Author Email Address: Achim.kleinrahm@zyklotron-ag.de

Introduction

ZAG Zyklotron AG operates two cyclotrons for the production of radioisotopes for medical applications and for the labelling of machine parts for the Radionuclide Technique in Mechanical Engineering RTM.

ZAG Zyklotron AG has developed a high power gas target for the production of I-123 at cyclotrons.

Description of the Work

The new developed high power gas target will be shown.

RTM is a powerful and sensitive method to measure online the wear rates in the range of nm/h at running engines or tribometers. This non-destructive measurement technique is widely used for research and development work all over the world.

The three parts of this technique will be explained:

1. The process of radioactive labelling at a cyclotron,
2. The two possible measurement procedures and
3. The measurement equipment, developed by ZAG Zyklotron AG.

Based on measurement examples the possible sensitivity of this method will be demonstrated.

References

Brochures of ZAG Zyklotron AG on www.zyklotron-ag.de

Keywords: accelerator produced isotopes, gas target, wear, radionuclide technique, continuous wear measurement