نموذج (I) : بيانات بحث مقدم للترقية

البحث الاول – مشترك (تم التحكيم بذات اللجنة شهر نوفمبر 2020)

1- عنوان البحث

عنوان البحث
A Study of Neutron and Gamma-Ray Interaction Properties with Cobalt-Free Highly Chromium Maraging Steel

2- البيانات الخاصة بالنشر

إسم المجلة	Journal of Modern Physics
رقم المجلد	6 ; pp. 1526 - 1532
تاريخ النشر	سبتمبر 2015
منهجية البحث	دراسة تجريبية

5- ملخص البحث باللغة الإنجليزية

Cobalt-free maraging steels of different compositions have been prepared by electro-slag remelting technique using titanium and chromium instead of cobalt. Neutron removal cross-sections have been calculated, also mass attenuation coefficients and effective electron densities have been determined for the prepared samples in the photon energy range up to 2.8 MeV. Other steel alloys and lead samples have also been investigated for the sake of comparison. The results prove the superiority of cobalt-free maraging steels compared with the other steel types to be used as a proper shielding material in the nuclear field. Among the investigated steels, the steel “0.045%C- 13.35%Ni-2.05%Cr-4.5%Mo-0.06%Ti” has the best attenuation properties.