



ISTITUTO ITALIANO  
DI TECNOLOGIA

## TITLE

Composite nanocrystalline / amorphous coating for the protection of metal components in nuclear plants cooled with liquid metal or molten salt

## INVENTORS

Fabio Di Fonzo, Marco Beghi, Francisco Garcia Ferre

## DESCRIPTION

Cladding tube for nuclear fuel usable in a reactor cooled with liquid metal or molten salt. Said tube comprises a tubular body of metallic material and a protective coating applied on an outer surface of the tubular body, intended in use to come into contact with the refrigerant. The coating includes at least one layer of ceramic material, comprising a matrix composed of the ceramic material in the amorphous phase, within which are dispersed nano-domains composed by the ceramic material in the crystalline phase.

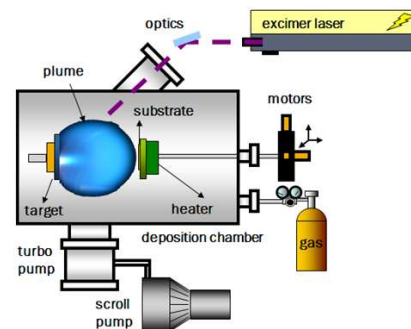


FIG. 1

## APPLICATIONS

Nuclear system, metals protection

## KEYWORDS

Nanocrystalline, amorphous ceramic composite, coatings, protection, pulsed laser

## BIBLIOGRAPHIC DATA

Rivestimento composito nanocristallino/amorfo per la protezione di componenti metallici in impianti nucleari refrigerati a metallo liquido o sale fuso

Application Number	US 13/779066
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Applicants	Fondazione Istituto Italiano di Tecnologia

## CONTACTS

Technology Transfer Office	Lorenzo Rossi	+39 010 71781 489
		lorenzo.rossi@iit.it