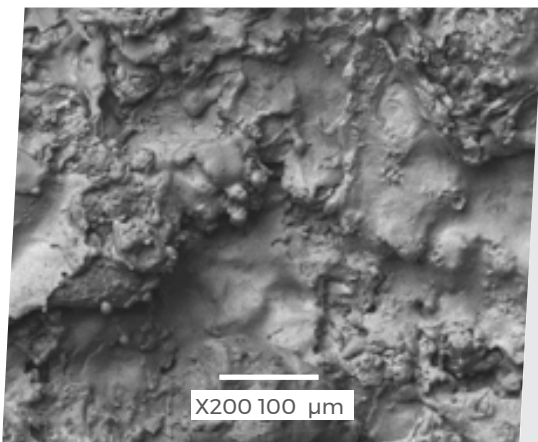


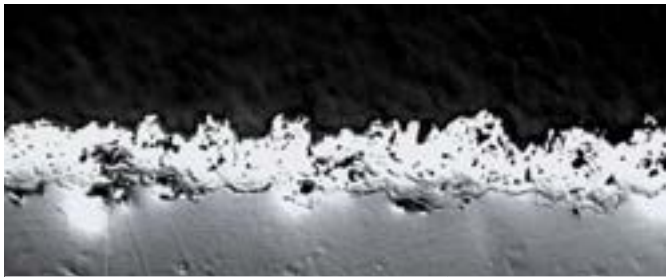
Air Plasma Spray Titanium Coating



With different thickness and roughness levels, APS Ti coatings are suitable for several kinds of medical devices. Low roughness Ti coatings are typically used to coat dental implants and spinal components, while high roughness Ti coatings are used on joint components.

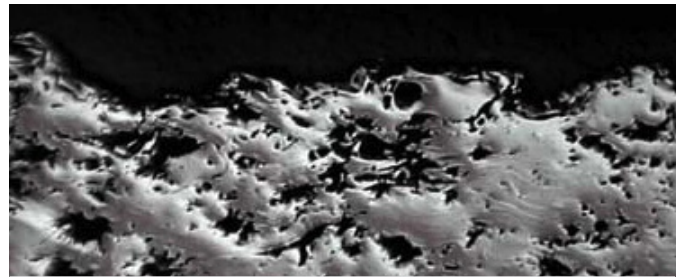
Air Plasma Spray Titanium coating

Y371



Suggested thickness	20 -100 µm
Adhesion strength	≥ 45 MPa
Porosity	4 -7 %
Roughness (Rt)	40 - 80 µm

Y367

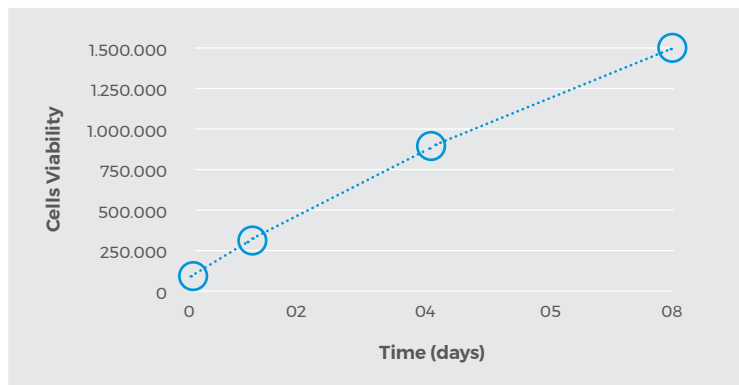


Suggested thickness	150 - 350 µm
Adhesion strength	≥ 30 MPa
Porosity	20 - 40 %
Roughness (Rt)	90 -170 µm

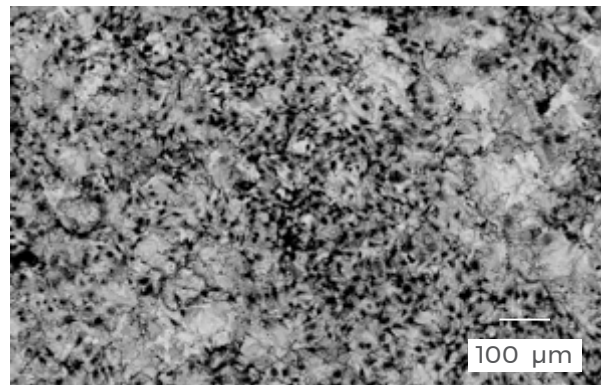
Excellent biocompatibility has been established for both THE coatings through in-vitro and in-vivo characterization ^{1,2,3,4}

Y371

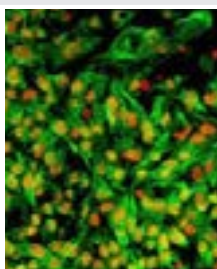
MTT TEST - SAOS-2 onto Y371 Ti Coating



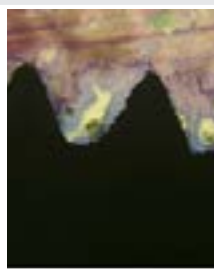
Osteoblast Cells Growing Proliferation Trend¹



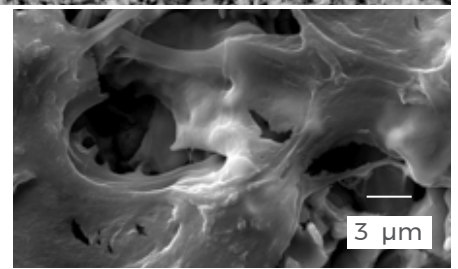
Confocal Laser Scanning Microscopy 8 days after cells seeding: Alkaline phosphatase marker in green, cell nuclei in red.¹



Histological section for a Plasma Spray Y371 coated implant in cortical bone after 12 weeks' implantation in sheep.²



SEM images (1000x and 3000x magnification) 8 days after cells seeding: cells appear spread out and adherent to the surface.¹



Y371 and Y367 Ti Coatings have enjoyed decades of successful clinical use associated with several different medical devices, all having the same essential requirement i.e. to be osseointegrated into host bone tissue.

1. In vitro assay performed by Prof. L. Visai, Pavia University, Italy
2. In vivo test and histology performed by A. Rebaudi, P. Trisi, BIOCRA – Pescara – Italy;
3. Proceedings eCM XIII 2012 - In vivo evaluation of titanium macro-porous structures manufactured through an innovative powder metallurgy approach - R. Ferro de Godoy, G.Blunn, M. Coathup, A.Goodship;
4. Proceedings 9th World Biomaterial Congress 2012 - In-vivo assessment of the ingrowth potential of engineered surface topographies produced by Fast Plasma Sintering - A. Goodship, G. Blunn, E. Preve, L. Facchini, F. Bucciotti and P. Robotti;



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