

TAKENAKA MIDDLE EAST LLC

1. Summary

Takenaka Seisakusho and GSI Creos Corporation, have jointly established a Middle East affiliate called 'TAKENAKA MIDDLE EAST LLC' (TME) based in Ras Al Khaimah Investment Authority (RAKIA), a government entity of Ras Al Khaimah (RAK). (Fig.1)

TME offers special coating service based on well-advanced paint system having ultra-high anti-corrosion performance with tremendous mechanical properties on any kind of metallic parts. The company, which will manufacture well advanced anti-corrosion materials used primarily in the oil-gas industry, was officially incorporated on 2 November in the emirate.

This advanced coating system shall contribute ultra-long life of any metallic parts used in UAE as well as GCC countries.



Fig.1 Facility of TME

2. Core Competence of TAKENAKA MIDDLE EAST

2.1 Background

Oil and Gas plants in Middle East countries are always annoyed by heavy corrosion on their any metallic parts because of very bad corrosion environment such as salt from ocean, sea water, strong ultra-violet, high and low temperature and salty sand.

Under this environment, conventional treatment systems are NOT enough to solve this sever corrosion problem and users have strongly been requesting better surface treatment to protect those parts.

Takenaka Japan has finally decided to build up their own coating facility to meet strong request from users who struggle against sever corrosion problems and they know Takenaka's highest quality from their past experience.

2.2 TAKENAKA MIDDLE EAST offers the Best Surface Treatment in the World

(1) Nanotect® (Fig.2)



Fig.2 Nanotect®

Nanotect® is the "super" coating by using Carbon Nanotubes (CNTs) well-known as the most important material in Nano-technology, since early 2000's. Notable functions of CNTs include ultra-high mechanical properties, electrical and thermal conductivity and these characters contribute to the paint system such as **highest resistance to impact, abrasion, tightening torque and axial force, high pressure and high lubricity**. And these properties induce anti-corrosive functions over 4000 hours thanks to highly protective layer as barrier from corrosive factors.

Takenaka is **the world's first company** who could manufacture and commercialize this super corrosion protecting and mechanically strong coating using CNTs.

This coating shows the strongest mechanical properties, anti-impact and anti-abrasion in the world with

very high corrosion resistance thanks to Nano-technology. This advanced coating was regarded as the future generation, but TME is now ready to produce this super coating at RAK facility in order to provide for not only UAE, but also other nations.

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(2) TAKECOAT-1000®

TAKECOAT®1000 is the initial main product of Takenaka LLC that shows the world highest corrosion resistance **over 6000 hours** at Salt Spray Test.

This amazing anti-corrosion performance is obtained by Takenaka's specially designed dense polymers act as perfect barrier protection.

TAKECOAT®1000 has already been installed at many plants in UAE and other Middle East nations known as the best coating for anti-corrosion.



Fig.3 TAKECOAT®1000

(3) TAKECOAT Ceramic 1®

TAKECOAT® CERAMIC 1 provides powerful heat resistance **over 450 degree C** and long term durability. This surprising heat resistivity with high corrosion resistance is obtained by a uniquely developed ceramic process for inorganic resin film treatment.

Corrosion resistance and lubrication are not diminished even after heating, and the film remains stable.



Fig.4 TAKECOAT® CERAMIC 1

2.3 TAKENAKA MIDDLE EAST offers the Best Coating Technology

TME has tremendous coat technology with very uniform and thin coating layer on any kind of complex configuration such as Nuts & Bolts. (Fig.5,6,7)

This uniformed surface leads smoothness at fastening and un-fastening that contributes ultra-long life due to protection from allied force to the surface.



Fig.5 Pretreatment Machine



Fig.6 Coating Robot



Fig.7 Furnace to Coating Robot

2.4 TAKENAKA MIDDLE EAST offers these ultra-high-tech treatment with highest coating technology

There are no other companies can offer both advanced material and superior coating technology in the region. TME targets major share of surface treatment market thanks to these ultra-high-tech products, quick delivery with affordable price from RAK, UAE.