



UNDER-RAPS™ Rockets Ahead

CORROSION INTERCEPT® COOL TECHNOLOGY



Photo credit: NASA/Kim Shiflett & FPM Inc



NASA's new heat shield arrives 'protected'

NASA has combined technology developed for the space shuttle with designs used for the Apollo program to produce elements of the next spacecraft destined to deliver astronauts to the moon.

An early sign of that combination has made its way to the Kennedy Space Centre in the form of a prototype heat shield which is the same size and dimensions as the one planned to protect the Orion spacecraft as it enters the Earth's atmosphere on its return from the international space station or the moon. At five metres in diameter the prototype's heat shield is the largest of its kind ever built.

Although parts of Orion's thermal protection system, which serves as a heat barrier upon re-entry to earth, will use shuttle tile materials, the base of the heat shield will endure the most heat and will burn away (ablate) as it descends through the **atmosphere at more than 25,000mph**. Corrosion Intercept® shrink film was chosen to protect the shield during transport and storage. Application was by FPM Inc.

Corrosion Intercept® protects missile launchers

If you owned a missile launcher and it was to sit on a dock for up to six months before installation you'd want it well protected from corrosion.

And such is the case with the Royal Australian Navy which has had Containment Systems NSW wrap its

Launcher in Corrosion Intercept®.

In addition to being well wrapped, a dehumidifier has been hooked up with monitors for checking the moisture levels inside. A zippered access has been added for visual inspections to be carried out while the launcher is in storage.

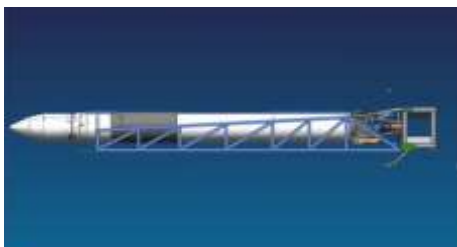


Photo credit: Containment Systems

Versatile spacecraft stages transported in Corrosion Intercept®

SpaceX, which has developed two brand new launch vehicles, has been awarded funding by NASA to demonstrate their delivery and return of cargo capability to the International Space Station. SpaceX is privately developing the Dragon crew and cargo capsule and the Falcon family of rockets, including main and upper stage engines, the cryogenic tank structure, avionics, guidance and control software and ground support equipment.

With the Falcon 1, Falcon 9 and Falcon 9 Heavy launch vehicles, SpaceX is able to offer a full spectrum of light, medium and heavy lift launch capabilities able to deliver spacecraft into any inclination and altitude, from low Earth orbit to geosynchronous orbit to planetary missions. With these vehicles all stages are reusable, making them the world's first fully reusable launch vehicles. The vehicles are protected during transport and shipping with Corrosion Intercept® shrink-film



Raytheon - Corrosion Intercept® packaging completed on time and within set budget

The Canberra Deep Space Communication Complex is managed by Raytheon Australia in conjunction with the CSIRO on behalf of NASA and the Jet Propulsion Laboratory.

Recently it was necessary for Integra Packaging to undertake the complex and delicate disassembly, packing and shipment of their DSS33 antenna. According to Support Services Manager, Andrew Paddison, "the plan went to schedule and a quality job was performed. Throughout this task, we found the staff at Integra Packaging were very helpful, thorough and met our expectations. We did not encounter any unexpected problems and the job was completed on time and within budget."

Andrew Paddison describes the job overview:

Antenna description:

The DSS33 antenna has an 11 metre diameter dish and weighs approximately 40t. Its purpose is to provide the capability to acquire, process, decode and distribute deep space probe and Earth orbiter telemetry data to and from various spacecraft.

Task outline:

We were instructed to disassemble, document, package and ship the antenna and associated spares to another NASA facility on the U.S. east coast where they will be re-utilised to support different space craft

missions that had previously been supported from here in Canberra.

Associated challenges:

The size, weight, expense and sensitivity of some of the components presented handling and shipping challenges. While the counter weights, main pedestal structure and gearboxes are built robustly, the dish panels and some technical components are very sensitive and easily damaged.

The need to avoid corrosion of the more sensitive pieces of equipment during storage/transit was paramount as this antenna is intended to be re-used.

Integra Packaging - solutions provided:

Integra Packaging provided the solution to the need to avoid deterioration of certain components, using their Corrosion Intercept® product. In addition to protecting the more corrosion-sensitive items, it provided the manpower and resources to have the entire antenna and its related hardware professionally packed within four 40ft sea containers.

Outcome milestones:

From an initial inspection visit, a scheduled plan and time-line was produced incorporating various resources. This included our technical and mechanical staff, container delivery, crane usage, production and delivery of purpose-built frames and crates, final packing and the eventual shipment via sea freight.



Mining and electronics opt for Integra

Integra Packaging, Under-Raps™ east coast agents, has been working on projects in the resources and electronics sectors.

Integra has just completed the Corrosion Intercept® protection, as well as supplying the crating, for gearbox and associated equipment to be shipped to Ghana Africa for Jaques, an international company with a reputation for producing equipment for the tough and demanding Australian quarrying and mining industry.

Today Jaques supplies, commissions and services its machines on a global basis with international factories and distributors strategically placed around the world. Jaques' international factories are located in Australia, Malaysia and Thailand. International distributors are located in USA, China, Canada, India, Indonesia, New Zealand and Philippines.



ACTION PACKED

THE PACKAGING GURUS



UNDER-RAPS™ now represented in Tasmania



David Thyne - managing director hands-on



Under-Raps™ has announced an agreement with Action Packed Packaging to represent Under-Raps™ products and protective wrapping services in Tasmania.

Action Packed, which has the extensive skills required to effectively protect equipment for storage or shipment, recently completed its first project supplying a customer with anti-corrosion solutions for their outdoor storage requirements using Corrosion Intercept® shrink-film and Corrosion Intercept® canvas.

**Action Packed Packaging Ph: 03 6393 7222
F: 03 6393 7999 email: actionpacked@bigpond.com**



Köppern Machinery Australia ships in Corrosion Intercept®

KMA is a fully owned subsidiary of Maschinenfabrik Köppern, Germany.

Located in Perth, Western Australia, KMA provides roller press solutions for applications in high-pressure comminution of ores and minerals, and agglomeration of various materials to existing and potential customers in many regions of the world.

The parts in the pictures showed no signs of corrosion after six weeks of sea shipment from Western Australia to Germany, protected in Static Intercept® bags.



This dessicant helps control dew point pressure



UNDER-RAPS stocks and supplies Container Dri II desiccant to help keep the dew point temperature below the actual temperature, even when the actual temperature drops within the shipping container due to day-to-night temperature fluctuations.

Container Dri II bags control condensation and eliminate damaging moisture by absorbing water through a flexible micro-porous packaging film. Once inside the interior of the bag, the proprietary formulation concentrates the water vapour into thick gel and prevents it from escaping back into the container or onto cargo. Container Dri II is made of environmentally friendly material, the bags may be disposed of with regular waste.

Website: www.underraps.com.au

Pinjarra tank encapsulation facilitates protective coating application



TCC Group is a WA industrial provider and a leader in protective coating applications.

A member of the Cape Group of Companies, TCC has with Under-Raps™ been encapsulating tanks at Alcoa's Pinjarra site for the past 12 months. The shrink-film used is 200 um so it meets the requirements for lead base paint and asbestos removal. The encapsulations allow for work to be carried out in a safe and dry environment.

UNDER-RAPS™ Loft News

One of the finest names in luxury cruisers



Australian built on Queensland's Gold Coast, the Maritimo is one of the world's finest names in long-range luxury cruisers.

Under-Raps has been working with Maritimo for three years and has developed a range of shipping covers using Under-Raps

Armorshield+™ fleecy lined shrink film. Under-Raps currently supplies covers for the 48,52,60 Sky Lounge range and the new 55 foot Sports yacht.

The pre-made covers are fitted in-house at the Maritimo boat yard, then steamed to the ship for loading.

Meet Kim Bui



Kim has been with Under-Raps for four years and in this time has moved from machinist to loft manager.

Kim runs a team of six Australians and non Australians from varying backgrounds such as Thai, Chinese, Vietnamese and Malaysian. They produce everything from boat covers to gun bags. Under-Raps™ is proud to be an equal opportunity employer.

**Under Raps™ Pty Ltd
2/211 Balcatta Road
Balcatta WA 6021**

Tel: +61 8 9240 5978

Fax: +61 8 9240 5979

Mobile: 0418 920 789

DISCLAIMER:

While every attempt has been made to assure the accuracy of the information contained in this document, Under-Raps™ cannot take any responsibility for the use or application of this information whether direct or indirect. We reserve the right to modify this document without notice.