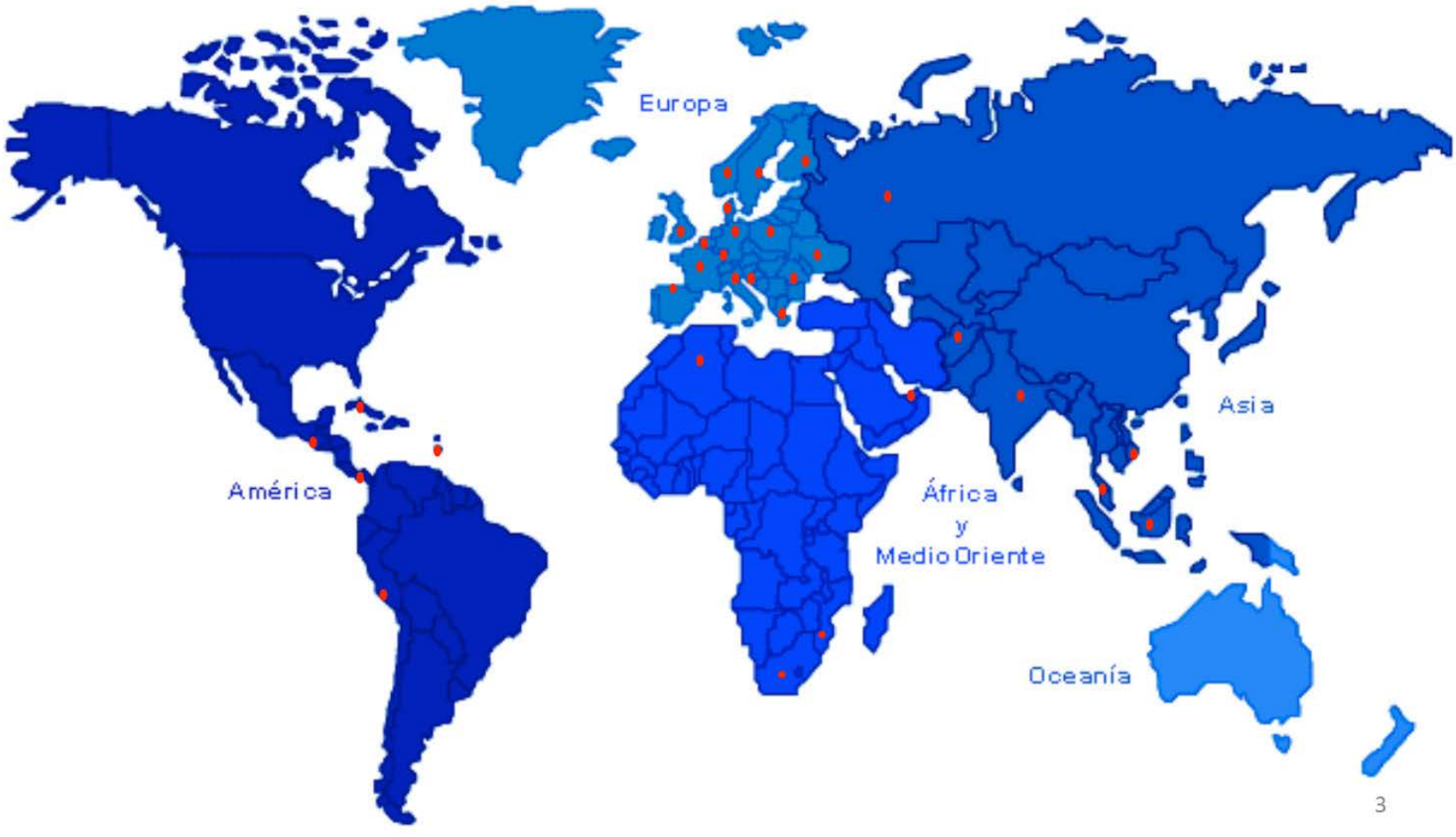
# Welcome to the presentation of

mcu coatings
best in corrosion protection

The first true *high solids* Moisture Cured PolyUrea coating


Europa
América
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**BE… DECIDE… ACT…**

**Responsible !!!**

**Use the “right” “innovative” paint technology…**

**MCU-Coatings**

Overcome all restrictions of application

Give a better solution to all corrosion problems

Easier surface preparation and paint work

Long term durability and excellent performance

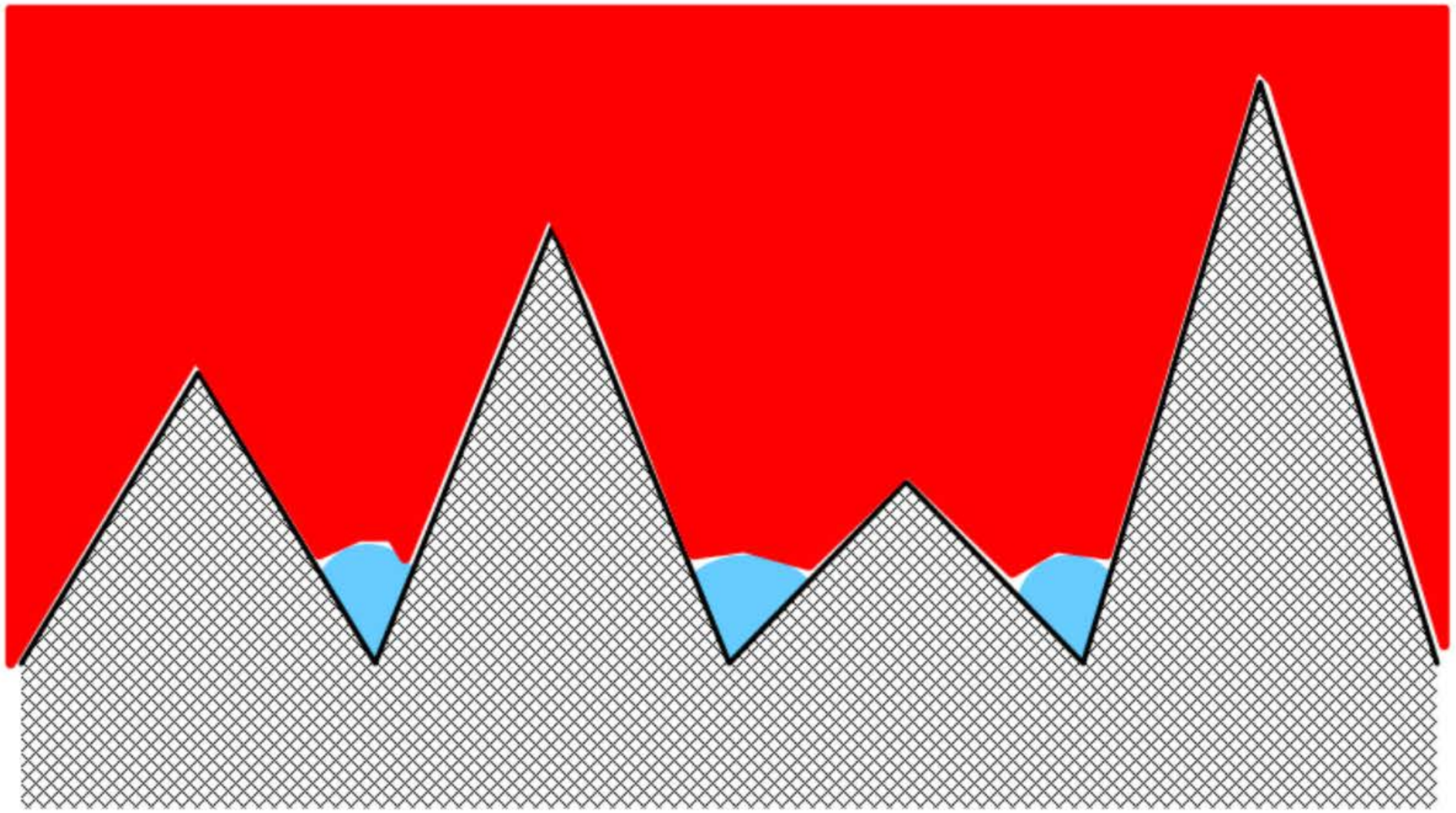
Reduce total project Cost

Reduce total project Time

Prevent failures

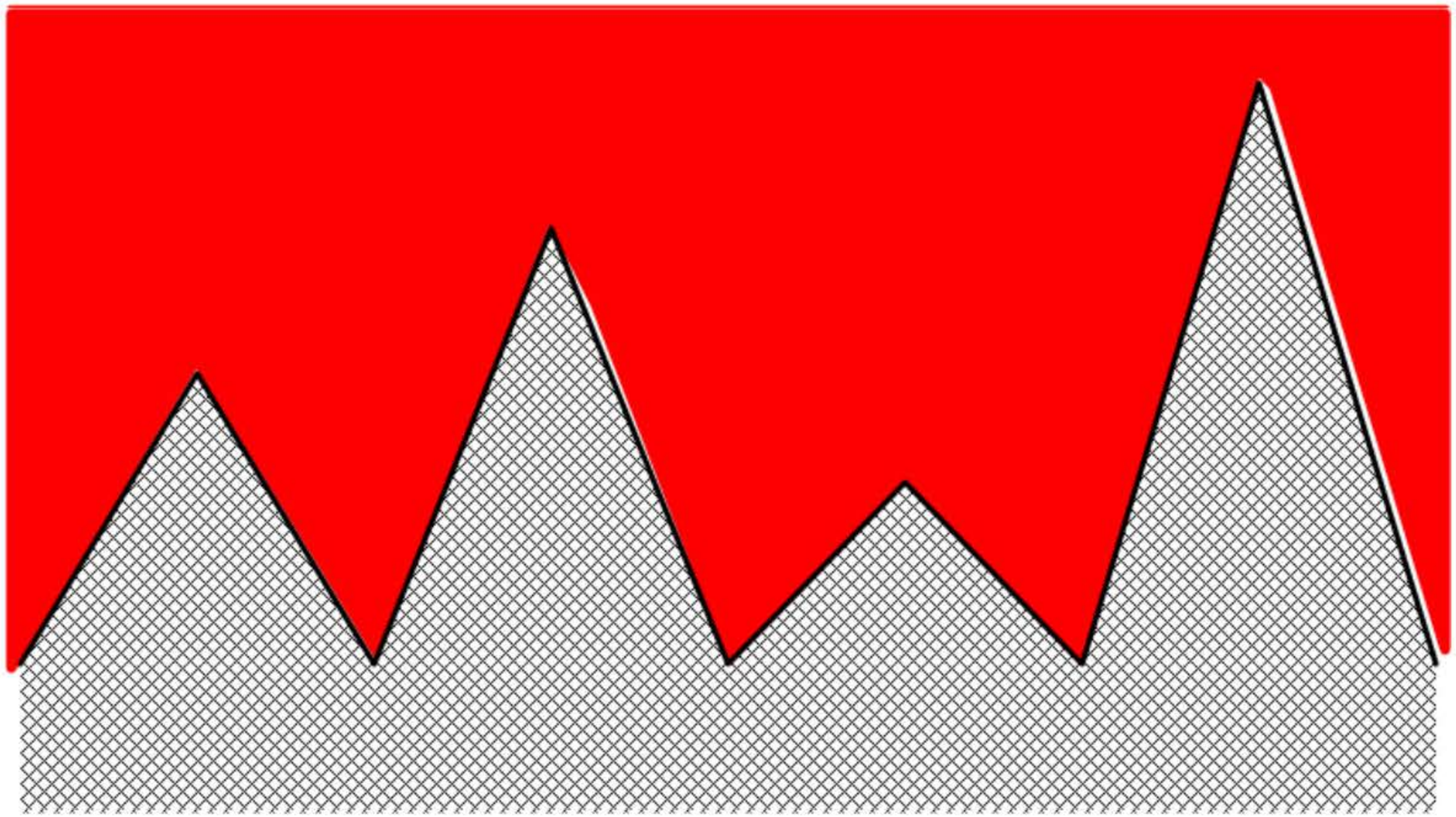
## Reaction using “non-moisture curing” coating on micro-level.

***The moisture rejects the coating, less adhesion and undercutting corrosion … causes premature failure***



# MCU-Coatings absorbs the moisture on the substrate.

***This results in a larger adhesion surface, less under cutting corrosion and better protection of the substrate***



**MCU-Coatings contains Micaceous Iron Oxide Pigments (MIO)**

*MIO enhances the protection by its properties:*

## - Barrier protection

Prevents the ingress of water, oxygen, and ions and thus prevents the corrosion of the steel and degradation of the binder.

## - Ultraviolet light block

Protect the surface of the binder system from the degrading action of UV and other weathering elements. Erosion rates and chalking are greatly reduced.

## - Film reinforcement

Improved resistance to blistering and corner build.

## - Increases the surface & inter-coat adhesion.

MIO produces a surface with an excellent physical profile for subsequent coats and increase substrate adhesion

# Harsh durable

## Taber Abrasion Test

ASTM 4060 1000 cycles, two CS-17 1 kg load

Result: < 30.10 mg weight loss

## Extended Salt Spray Exposure:

ASTM B-117: 20.680 hours

## Impact resistant:

ASTM D-2794-90: 150 inches/Lbs

## Flexibility:

for many years

## Temperature resistant:

150 °C (dry) continuous

## Immersion

Within 45 minutes

**All weathers**

6 – 99% RH

No dew point restrictions

Resistant to fog, rain and dew after minutes

Immersion after 45 minutes

Cures even at -15 °C

All year round and night application possible

Shut downs not necessary

## Surface Tolerant1

Best adhesion on *minimal* prepared surfaces

Low steel roughness required: 25µm or hand and power tool prepared

Flash rust tolerant (L)

Adhesion direct to green concrete

Best for over-coating old coatings as lead based, alkyds, etc (adhesion & flexibility)

## Surface Tolerant 2

Our primers are superior for over-coating old coatings:

Drying-stress in our coatings is less:

Epoxy: +/- 672 to 974 psi
Alkyd: +/- 300 psi
Poly-urea: +/- 39 to 413 psi

Surface preparation to:

SP1 Solvent Cleaning
ST2 Hand Tool Cleaning
ST3 Power Tool Cleaning
Sa 2 Commercial Cleaning
Sa 2,5 Near White Metal Cleaning
WJ5 UHP Water-jetting
WAB 6, etc…

**Easy to use**

1 component

1 Thinner

No induction time

No potlife

Ready for spray – roll – brush application

Only 6 products will cover ALL area's as
(exposed to immersion, UV, impact, abrasion, etc…)

**Typical short term costs savings 1**

**related to**

**No loss of TIME**

- Apply in 0 – 99 % Relative Humidity
  (0 – 30 % RH use MCU-Quickcure)
- No dew point restrictions (paper test)
- Immersion within 45 minutes
- Short cure times, even at -15 °C
- All year round and night application
- Adhesion to green concrete
- Over-coating within 45 minutes with MCU-Quickcure

**Typical short term costs savings 2**

**related to**

**No loss of LABOUR COSTS**

**Surface preparation:**
- Less blasting – less profile needed
- Less re-blasting
- No roughening between coats

**Application:**
- No mixing multiple components
- No induction time
- Fast cure & overcoat time

**Fast project completion time:**
- Less man hours
- Less equipment renting costs

**Accessibility** (no condition of the area)

**Performance and higher rentability of the contractor**

**SHORT term costs savings 3**

**related to**

**QUANTITY**

- Less blast profile (1 mils /25 µ)
- Tolerates flash rust (L)

**= Less grit**

- Lower blast profile: 15%-35% savings on primer paint consumption
- Thin film technology: only 80% of DFT required compared to traditional systems
- Less waste: 1 component

**= Less amount of coating:**

**Typical long term costs savings 2**

**by**

**QUALITY ASURANCE**
**(tolerance to critical circumstances DURING application)**

*Coating film will not be damage by:*

- Dew
- Humidity
- Temperature
- Immersion after 15 minutes
- High DFT of zinc primer

or

*Implementation:*

- 1 component only (no mixing errors)
- 1 Thinner only (no mixing errors)
- No induction time
- No pot life restrictions

# MCU-Coatings versus 2 Pack in Practice:

***A typical case history comparing 2 pack system to MCU Sea side and moisture areas.***

| | Module 1 | Module 2 |
|---|---|---|
| | **Epoxy Zinc 70 mu DFT**<br>**Epoxy MIO 300 mu DFT**<br>**2 pack Polyurethane 60 mu DFT** | **MCU-Miozinc 75 mu DFT**<br>**MCU-Miomastic 75 mu DFT**<br>**MCU-Topcoat 75 mu DFT** |
| Day 1 | Steel surfae prep. | Steel surfae prep. |
| Day 2 | 1st blast | 1st blast |
| Day 3 | Pick up blast to **Sa 2,5**<br><br>Profile check: profile was Rz 90 mu. It was expected that the primer would be low DFT, but because of the high profile, a lot of build up would be required. But this is **not possible to apply the Zinc thicker** as it would crack above 100 mu DFT. | Pick up blast to **Sa 2** since Miozinc does not require Sa 2,5 as a surface tolerant product. Price difference Sa 2,5 at 2 = 1 €/m2<br><br>Profile check: profile was Rz 90 mu. Primer was applied thicker to reach higher DFT. **MCU-Miozinc tolerates up to 350 mu DFT** |
| Day 4 | **Salt & Chloride check: 80 mg/m2. Too high**... fresh water wash to lower mg/m2 (sea side)<br><br>**No painting because of too high humidity** (rust bloom) | Salt & Chloride check: 80 mg/m2. As MCU primer **retract humidity from the surface, 80 mg/m2 is accepted**<br>Stripe coat + application of primer. No humidty restrictions |
| Day 5 | **Re-blast** to Sa 2,5 | DFT check<br>Stripe coat + application of second coat |
| Day 6 | Salt & Chloride check: 80 mg/m2. Too high... fresh water wash to lower mg/m2 (sea side) | DFT check + application of the Topcoat |
| Day 7 | Application of the primer stripe coat<br>Application of full primer | |
| Day 8 | DFT check<br>Application of the stripe coat + fu ll primer 2nd coat | |
| Day 9 | No painting because **dew point restrictions & T°/moisture** | |
| Day 10 | Application of Topcoat | |

***40 % project delay compared to MCU Technology***

**MCU-Coatings offers you a technology that:**

**Easy and Durable**

**Material Costs**… reduced by 20% - 30%

**Fastest Project Completion time**… guaranteed

**Long Term Performance**… has proven 2 to 3 times better