

# Introduction to coil coated metal

# Acknowledgments

- ArcelorMittal
- BASF
- Becker Industrial Coatings
- Corus
- ECCA France
- ECCA NL
- ECCA UK

# Guest lecture content

1. Building envelope examples
2. Coil coated metal
3. Coatings
4. Building applications
5. Cladding systems
6. Cladding profiles
7. Building performance functional design, thermal, fire, acoustic
8. Innovations

# 1. Building envelope examples

**Zoetermeer (Netherlands)**  
**Material: Colorcoat Celestia**  
**Architect: Archipel Ontwerpers**



**Baglan Bay (UK)**

**Material: Colorcoat  
Celestia® &  
Colorcoat HPS200®**

**Architect: DRU &  
Neath and  
Port Talbot Council**

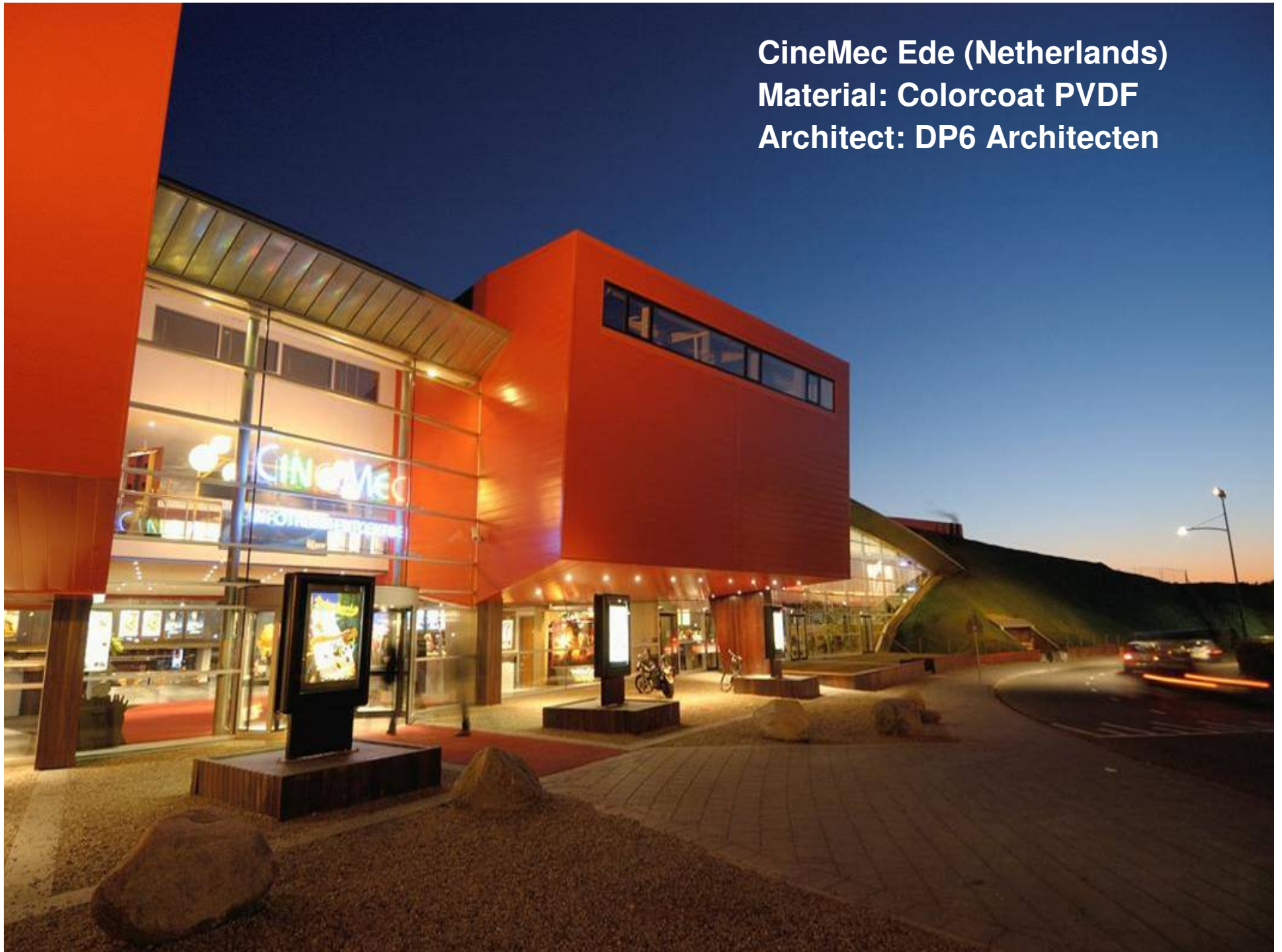


Photography courtesy of Corus

**IJmuiden (Netherlands)**  
**Material: Multicoat**  
**Architect: Klunder Architecten**

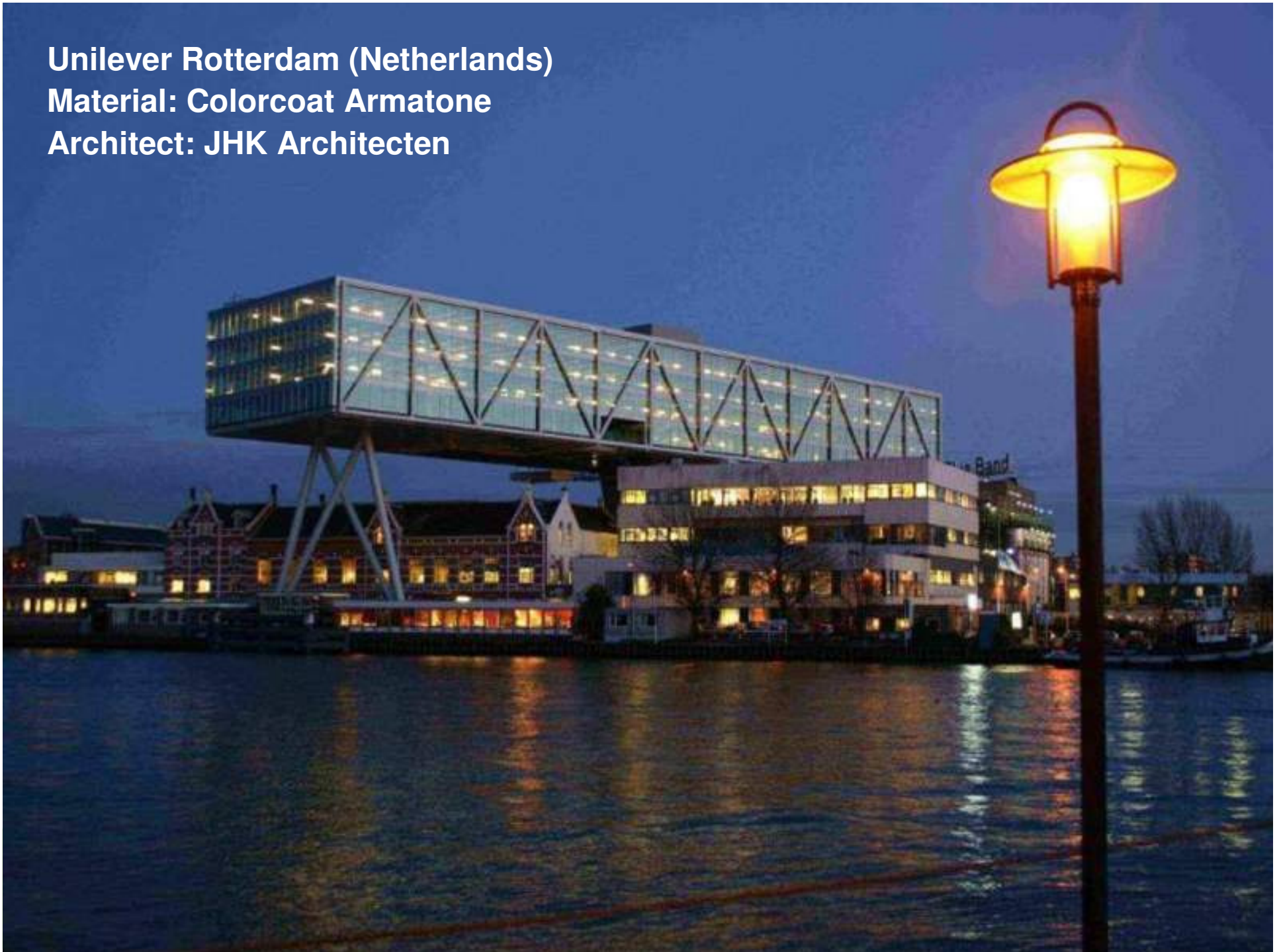


**CineMec Ede (Netherlands)**  
**Material: Colorcoat PVDF**  
**Architect: DP6 Architecten**

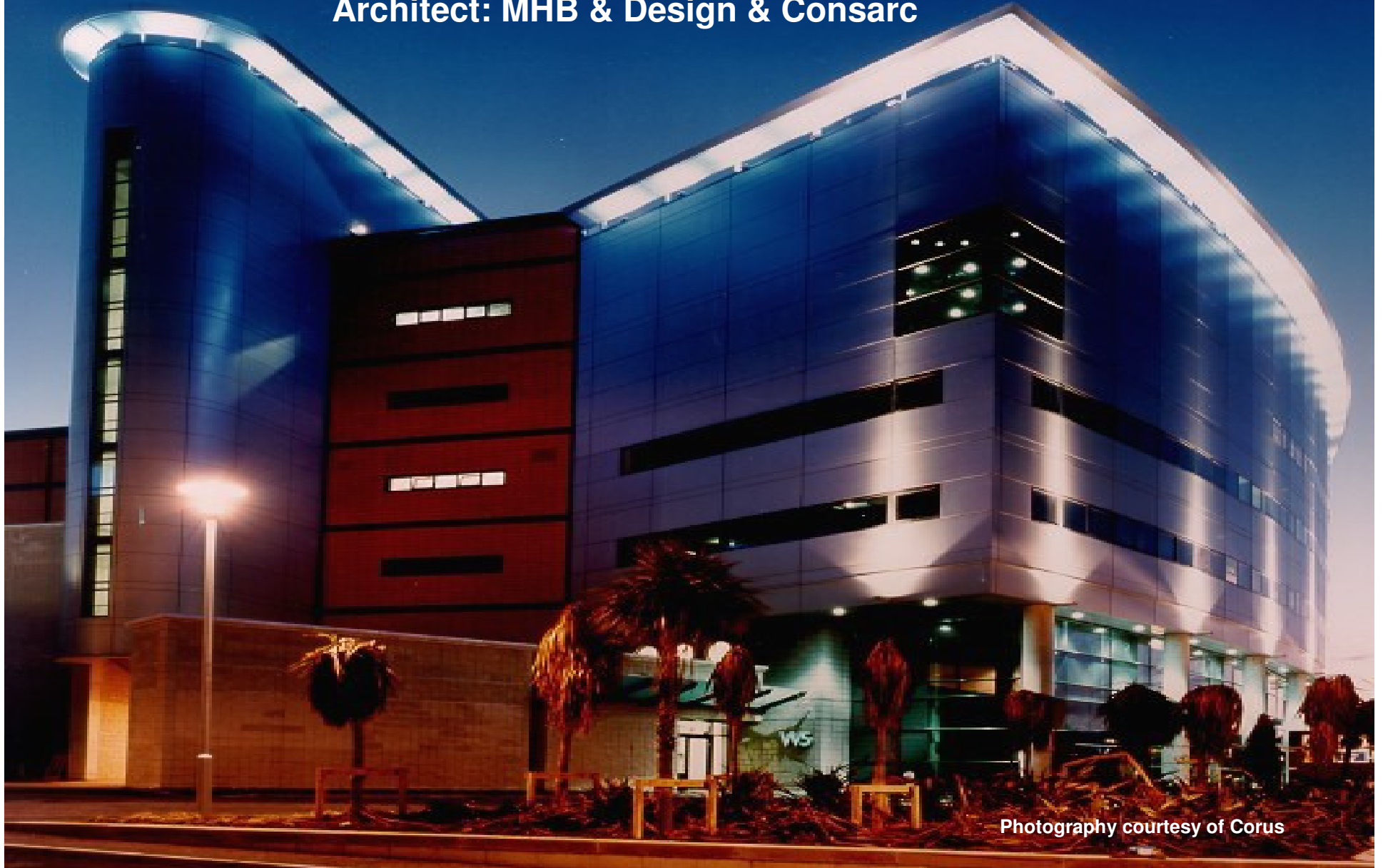




**Unilever Rotterdam (Netherlands)**  
**Material: Colorcoat Armatone**  
**Architect: JHK Architecten**



**Location: Belfast, Ireland**  
**Material: Colorcoat Celestia® &  
Colorcoat HPS200®**  
**Architect: MHB & Design & Consarc**



Photography courtesy of Corus



**Location: Nailloux (France)**

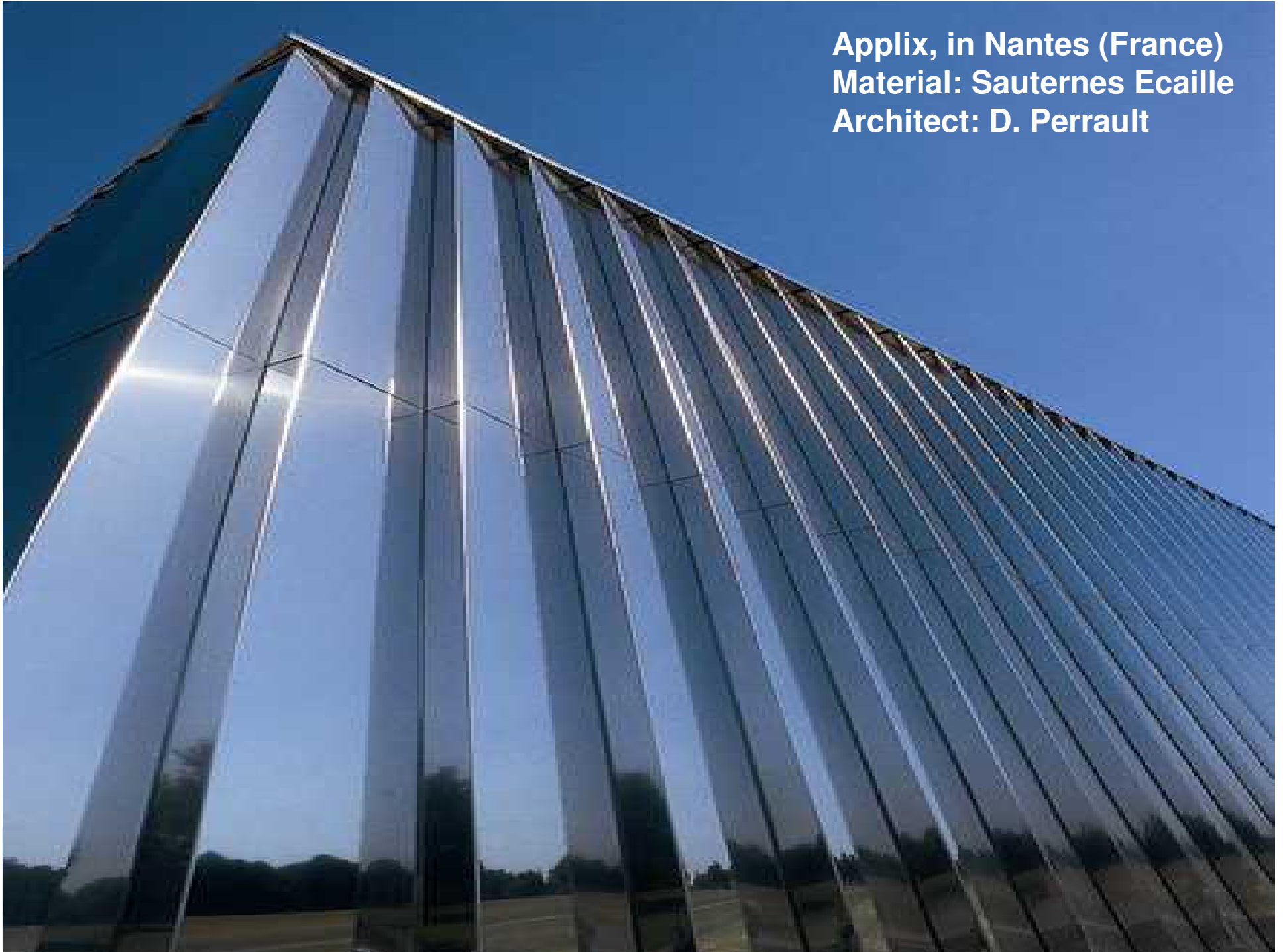
**Material: Système  
Reynobond Architecture  
(Alcoa architectural  
products)**

**Architect: Axel Letellier**

**Clinic Sainte Marie, in Cambrai (France)**  
**Material: ISOFRAN & Sauternes 300**  
**Architect: J. Journel**



**Applix, in Nantes (France)**  
**Material: Sauternes Ecaille**  
**Architect: D. Perrault**



**Brighton (UK)**  
**Material: HPS200**  
**Architect: RH Partnership**



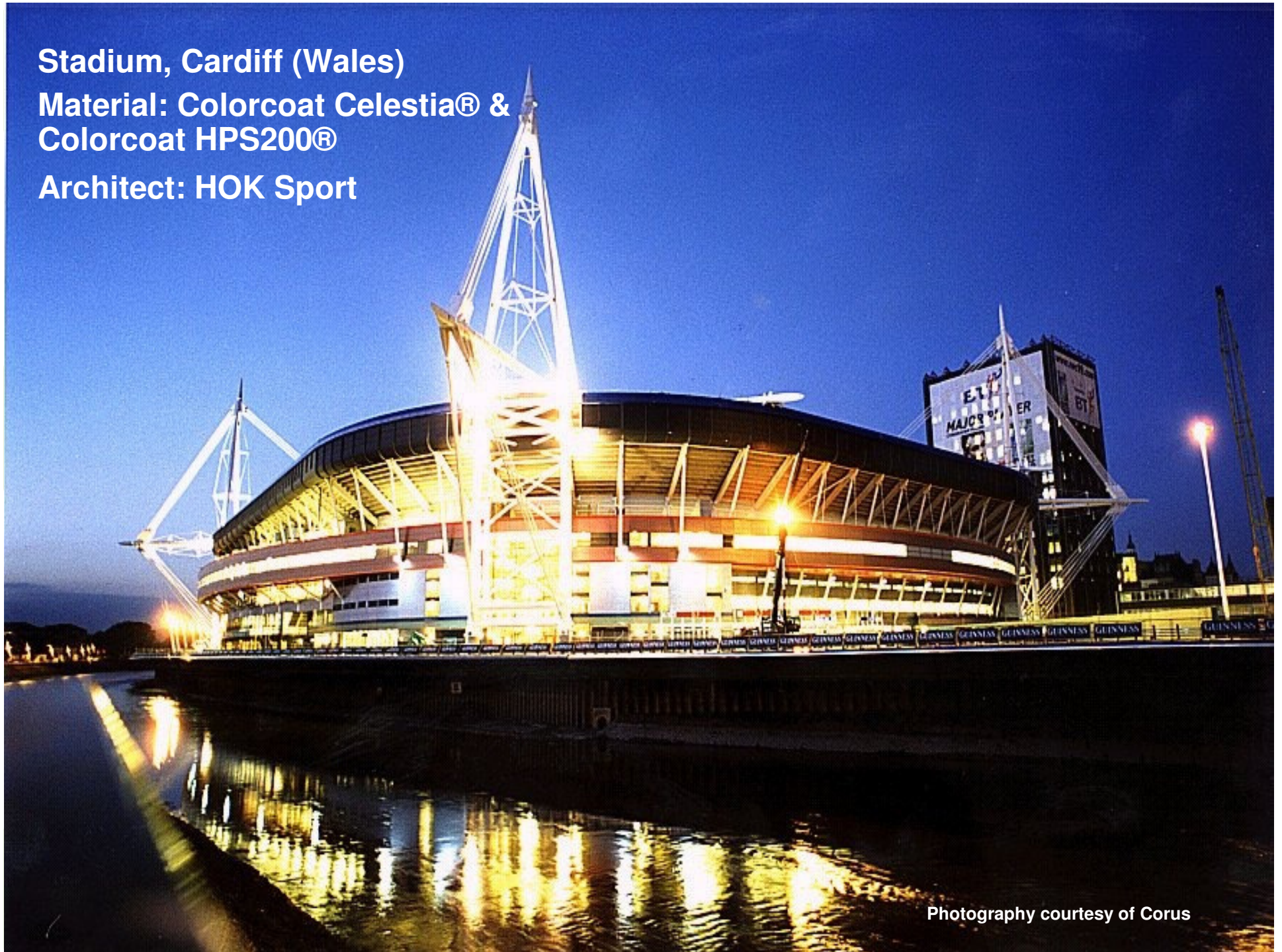
**Roissy Terminal F airport, in Paris (France)**  
**Material: Mascaret**  
**Architect: P. Andreux**



**Stadium, Cardiff (Wales)**

**Material: Colorcoat Celestia® &  
Colorcoat HPS200®**

**Architect: HOK Sport**

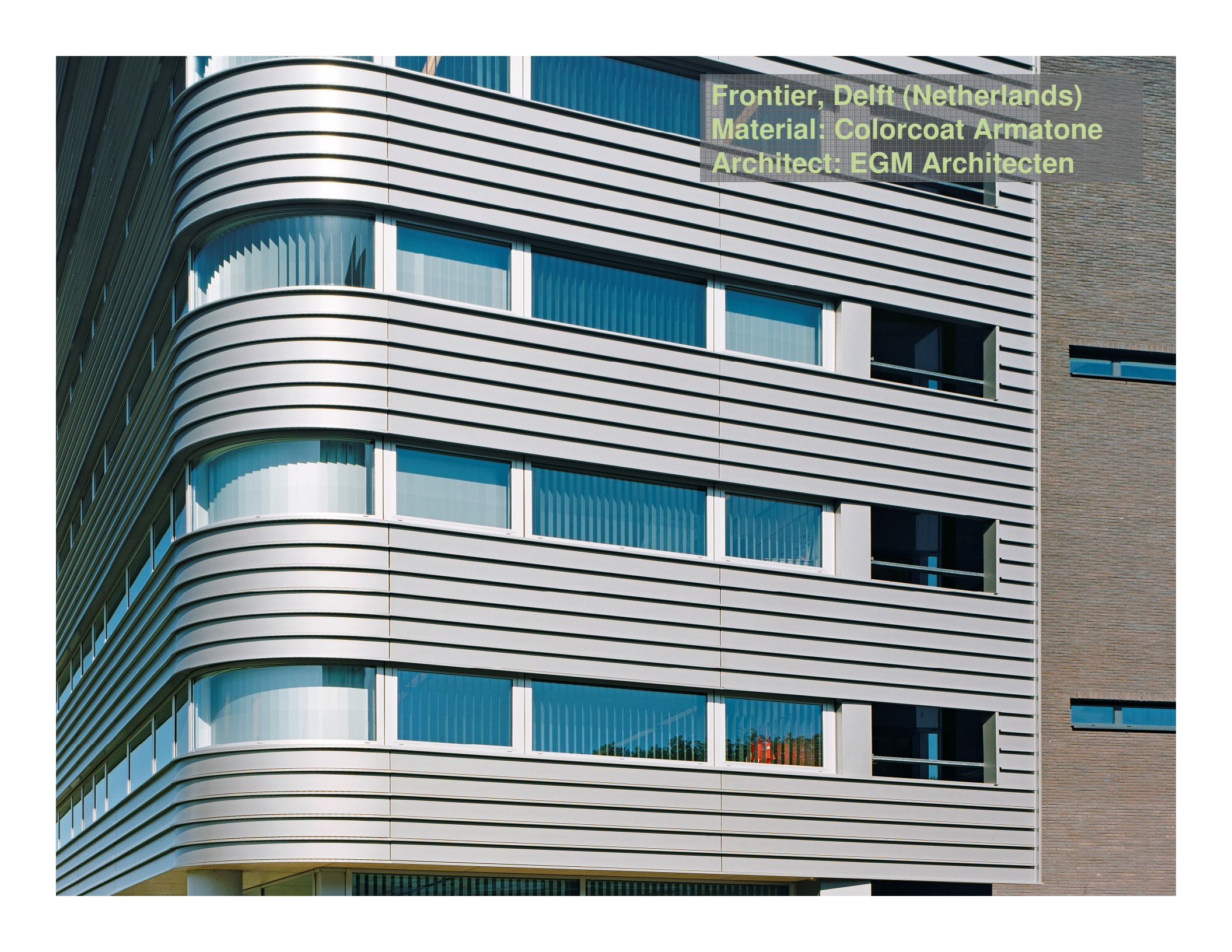


Photography courtesy of Corus



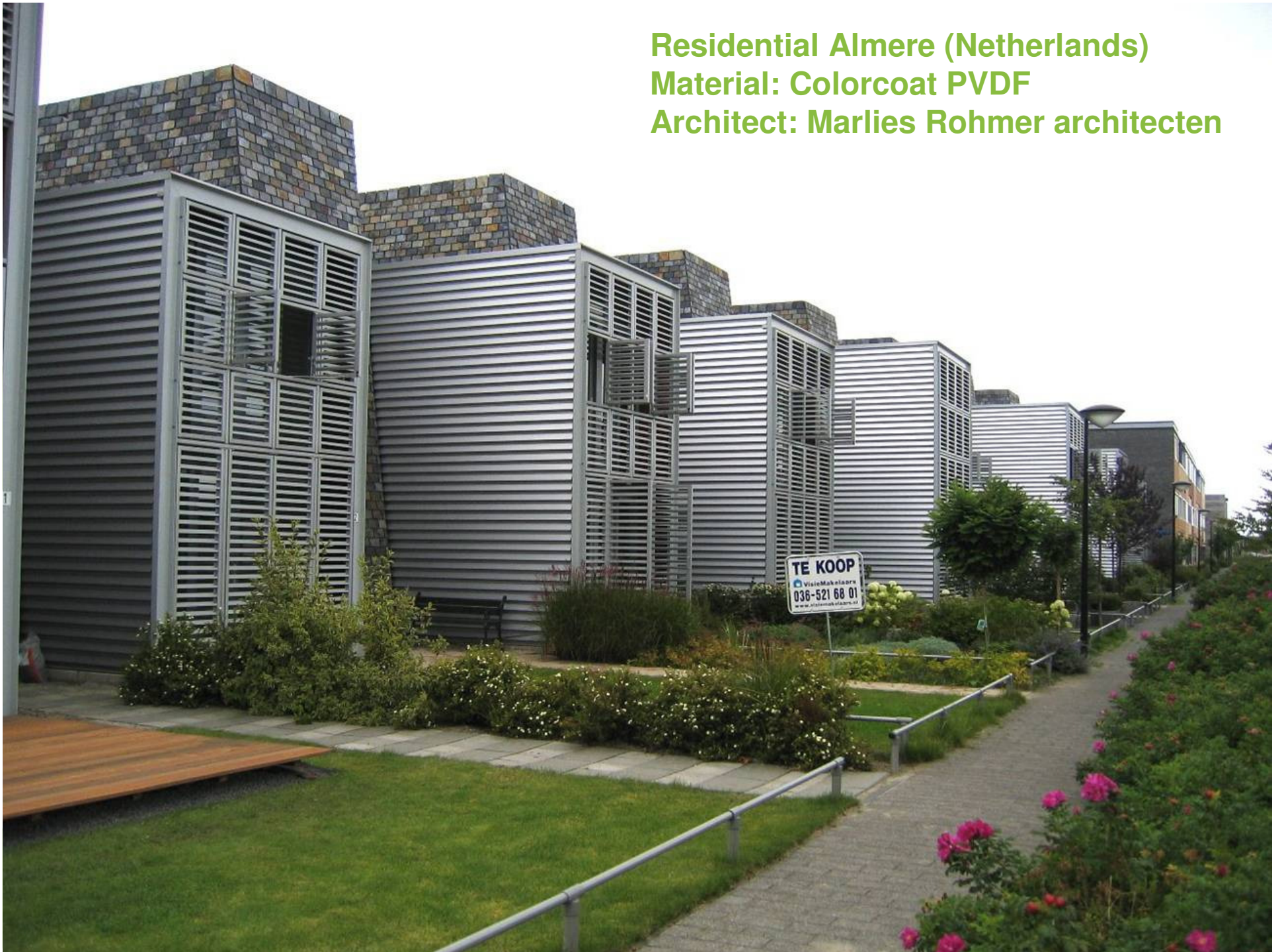


**Housing estate Zwolle (Netherlands)**  
**Material: Colorcoat Armatec**  
**Architect: van den Belt**



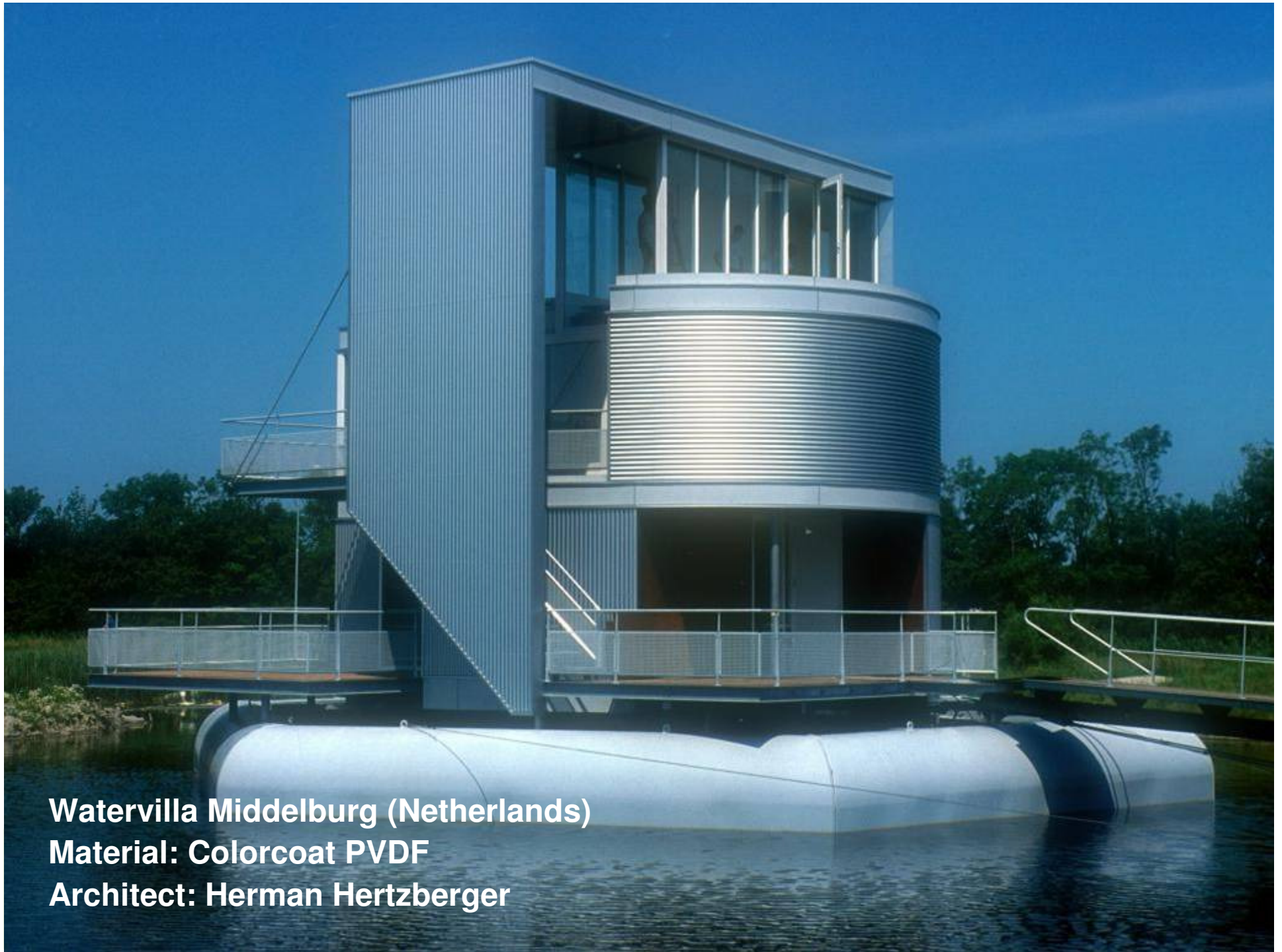
**Frontier, Delft (Netherlands)**  
**Material: Colorcoat Armatone**  
**Architect: EGM Architecten**

**Residential Almere (Netherlands)**  
**Material: Colorcoat PVDF**  
**Architect: Marlies Rohmer architecten**





**Steel study house Zoetermeer (Netherlands)**  
**Material: Colorcoat Celestia**  
**Architect: Archipel ontwerpers**



**Watervilla Middelburg (Netherlands)**

**Material: Colorcoat PVDF**

**Architect: Herman Hertzberger**

**Next generation Zoetermeer (Netherlands)**

**Material: Colorcoat Celestia**

**Architect: An-archie bv**





**House Zoetermeer (Netherlands)**  
**Material: Colorcoat HPS200**  
**Architect: Gunstra Architectengroep**

**Houses Leidschenveen (Netherlands)**  
**Material: Colorcoat PVDF**  
**Architect: Oudclad Leiderdorp**





Houses Amsterdam (Netherlands)  
Material: Colorcoat PVDF  
Architect: Tangram Architecten



**Apartment buildings Almere (Netherlands)**  
**Material: Colorcoat PVDF**  
**Architect: Atelier Zeinstra Van de Pol**



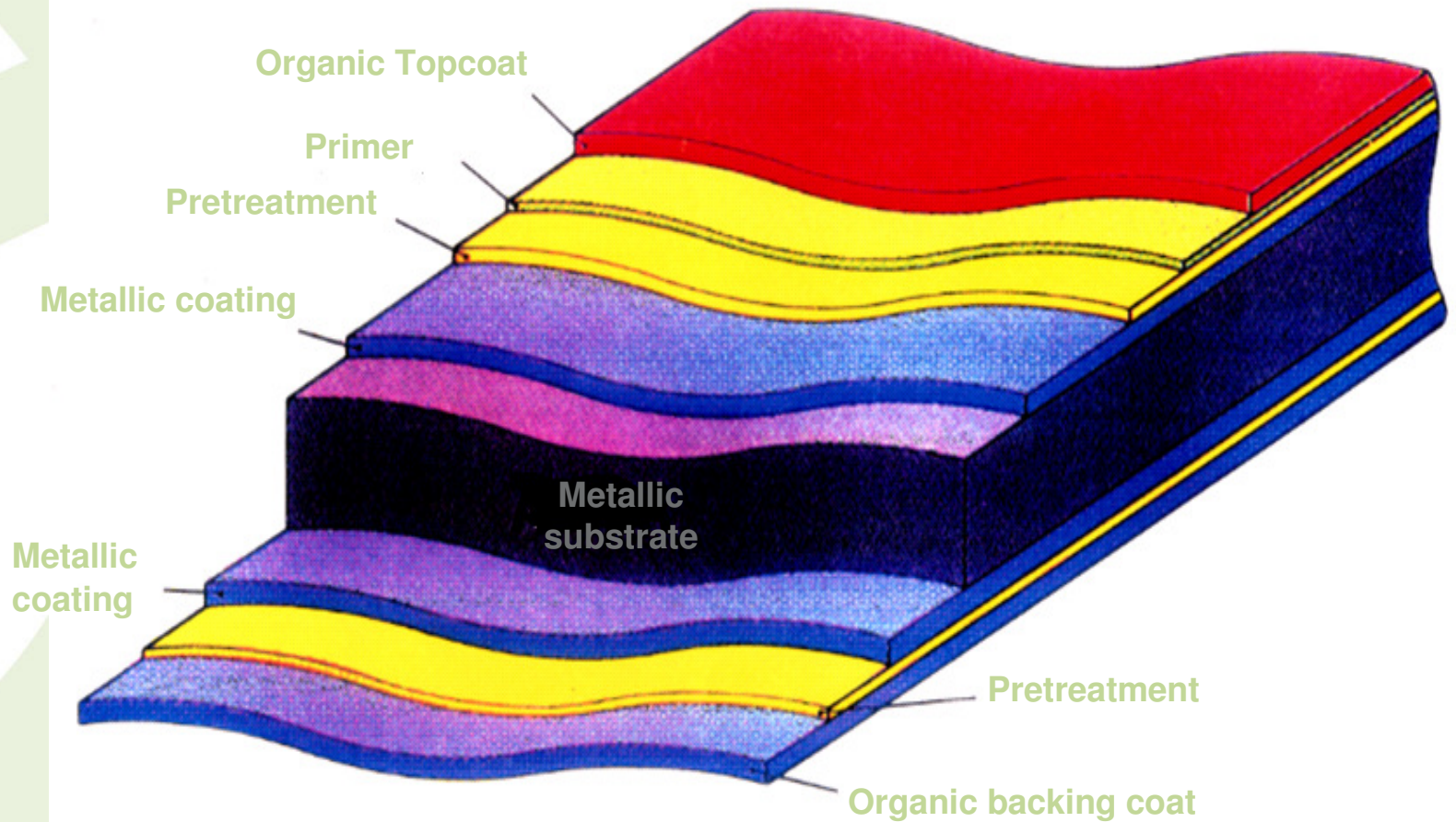


**What do these buildings have in common?**



**They are made with coil coated materials...**

## 2. Coil coated metal (1/3) What is coil coated metal ?

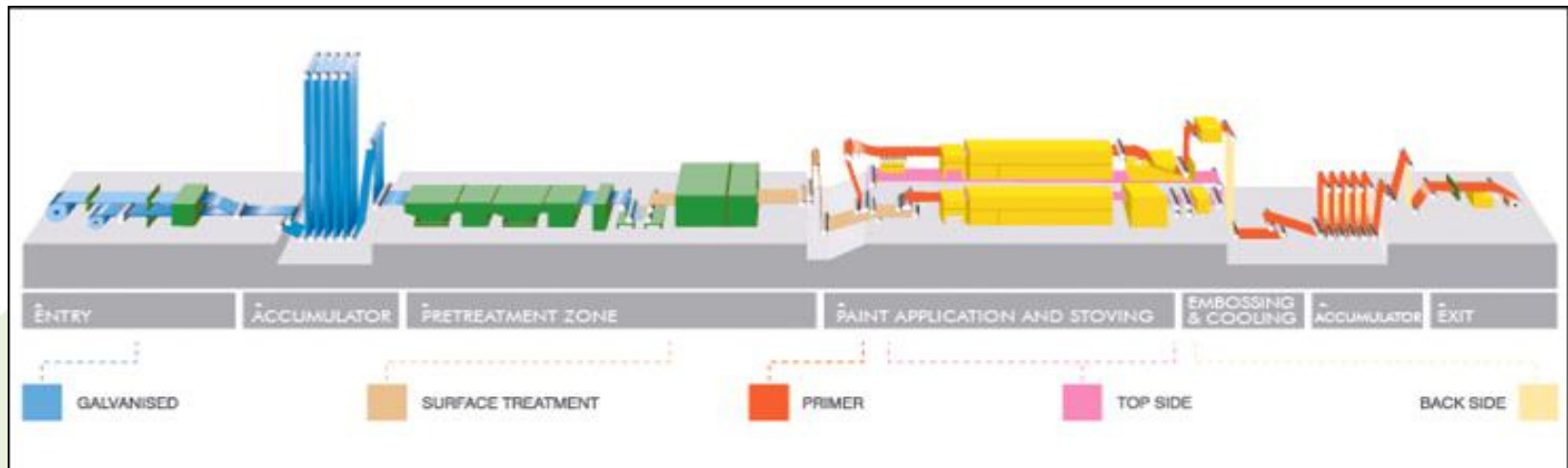


## 2. Coil coated metal (2/3)

### Coil Coating process

The process consists of the following operations :

- **Cleaning** (alkaline degreasing)
- **Surface treatment** (role: improve adhesion between metal and paint, and corrosion resistance)
- **Primer application** (role: bind the topcoat to the substrate, and corrosion resistance)
- **First curing oven**
- **Topcoat application** (role: aesthetic and protective)
- **Second curing oven**
- **Protective film** (if any)
- **On-line inspections**



## 2. Coil coated metal (3/3) Advantages

- High constant quality product
- Easier logistics
- Clean process
- Recyclable product
- No need for hazardous or inflammable storage
- Non-air polluting
- Non handling of dangerous chemicals

### 3. Coatings (1/2) Product selector

Product	Substrate Zn/Al	DFT µm	EN 10169-2 RUV 1-4	RC 1-5
Polyester	Z275	25	2-3	2-3
Polyester MB	Z275	35	2-3	3
Polyester HB	Z275	50	2-3	4
PVDF	Z275	25	4	2-3
PUR HB	Z275	50	4	4
PUR HB	Z265 Galfan	50	4	5
Plastisol	Z275	200	2-3	4-5
Plastisol +	Z265 Galfan	200	4	5





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