



Wheating Steel – 100 års holdbarhed. Hvordan det?

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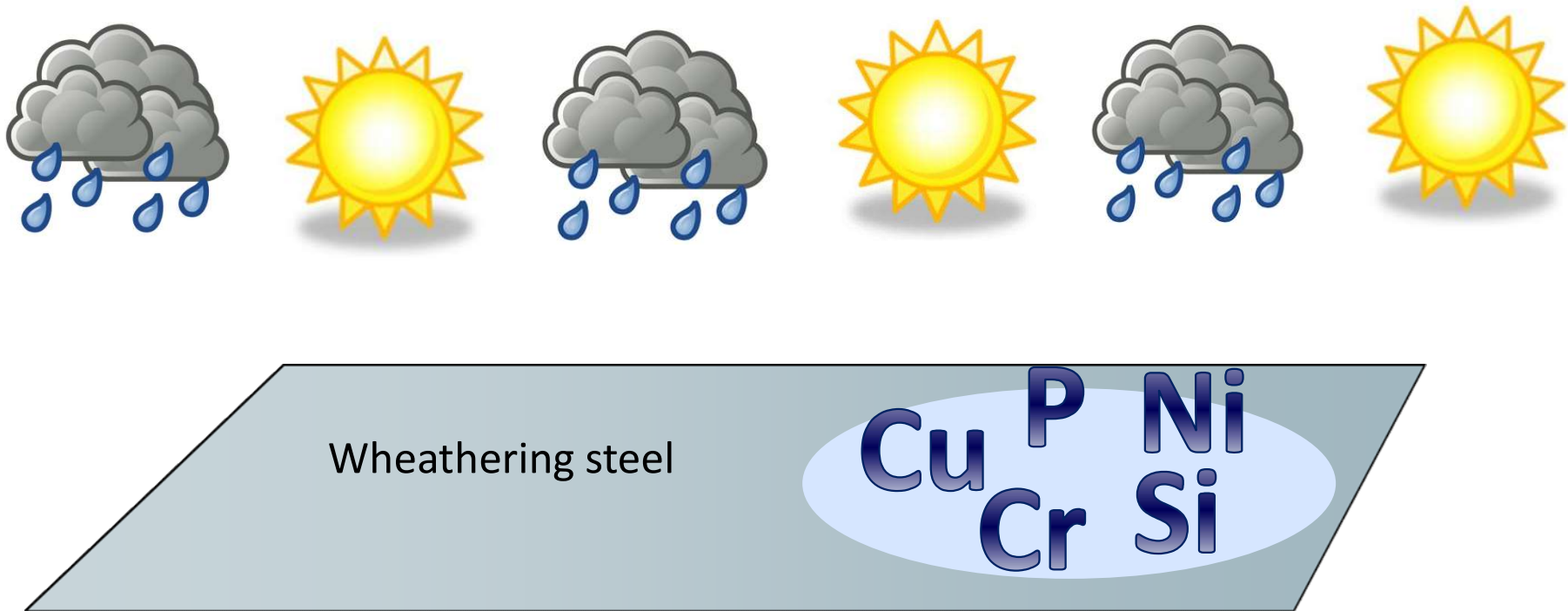
SSAB Europe, Denmark



When rust becomes a coating

SSAB

How does it work?



Patina formation



2 weeks



2 years



10 years

SSAB

Why **SSAB** weathering steels?

COR-TEN®

- ▶ In 1933, U.S. Steel introduced COR-TEN® steel.
- ▶ Originally developed for the railway industry
- ▶ COR-TEN®, Increased **Corrosion** resistance and **Tensile** strength
- ▶ SSAB is one of three steel producers in the world with license to manufacture the original weathering steel COR-TEN®
- ▶ SSAB is the **only** steel company in Europe with the license to produce COR-TEN®



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Jonathan C. Parks
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October 30, 2015

Re: COR-TEN Steel

To Whom It May Concern:

This is to certify that SSAB Europe Oy is an official licensee of the trademark COR-TEN for high-strength, low-alloy steel.

COR-TEN is an internationally registered trademark of United States Steel Corporation.

The COR-TEN license to SSAB Europe Oy runs for a period of five (5) years beginning October 1, 2013.



1.1



1.2

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Roof of forged steel



Iron storage from 1801



To be aware of...



Indoors, no wet/dry cycles



Outdoors, unclean surface



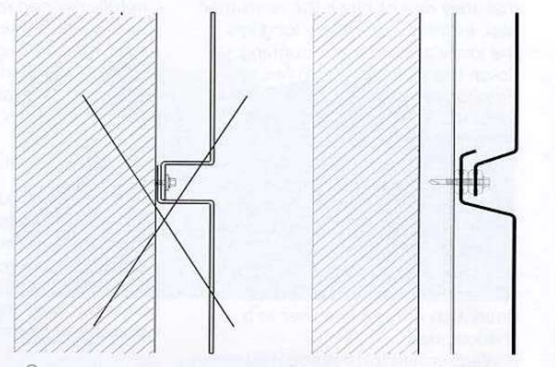
Discoloring of concrete



Vegetation overgrowth



Don't use weathering steel close to roads on which de-icing salt is used



Free airflow/moisture escape

SSAB

Where are weathering steels used today?

Facades and art

- ▶ Beautiful surface
- ▶ Low maintenance costs
- ▶ Environmentally friendly
- ▶ Low life-cycle cost



Examples of facades





Royal Technical University in Stockholm

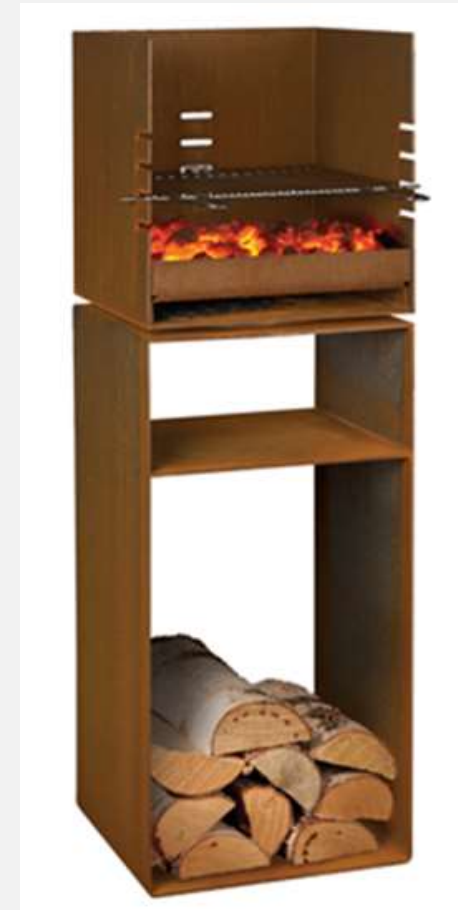
COR-TEN
blends into
existing brick
building
environments

Newly built house for
architectural education

Surrounding houses are
protected by heritage
regulations

SSAB

Artwork





Bridges and structures

- ▶ Low life-cycle cost
 - Low production cost – no painting needed
 - Low maintenance cost – no re-painting necessary
 - If the steel is painted, longer intervals between re-painting
- ▶ Environmentally friendly
 - No painting means no risk of polluting surroundings with chemicals
 - 100% recyclable
 - If wood is substituted, no need for "poisonous" impregnation

Ski Jumping towers

- ▶ Appearance that blends into the landscape
- ▶ High strength steel enables lighter structures that are easier to transport and to erect



Ski-jumping towers - Falun, Sweden

Transmission poles

- ▶ No need for corrosion protective treatment
- ▶ If painted, double time intervals between maintenance painting compared to carbon steel
- ▶ 100% re-cyclable
- ▶ In some applications, impregnated wood is substituted



Denmark, Aarsleff Rail

SSAB aim to deliver Structural Hollow Sections during 10 years



SSAB

Eiffel Tower – Paris – France



- ▶ Designed by Gustave Eiffel
- ▶ Construction finalized in 1889
- ▶ Total height 324 meters
- ▶ 7.300 tons of wrought steel
- ▶ **If only Mr. Eiffel could have used Weathering Steel for his world-famous structure**
- ▶ The City of Paris could have saved on **8,6 tons** of paint, every year!
- ▶ **1.092 tons year-to-date**

Questions