Our story i continues



1892

Founding of the Kempensche Zink Maatschappij

The KZM was founded in 1892 by Lucien and Emile Dor, later also known as 'the Budelse Zinkfabriek'. The Budel zinc factory was founded under the name Société Anonyme des Zincs de la Campine or, in Dutch: Kempensche Zinkmaatschappij (KZM).

Zinc manufacturing

Zinc is extracted from ores. The pictures show how in earlier days the furnaces were filled with ore. After 16 hours of melting, the liquid zinc was drained from the furnaces and the remaining waste (zinc ashes) was discharged. The liquid zinc was then processed into small zinc blocks, also called ingots.



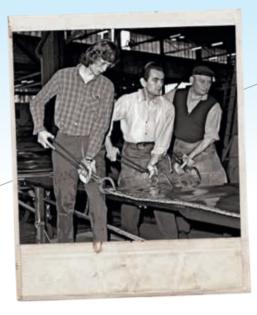
Stacking ingots



Melting furnace



Zinc winning becomes our core business



Zinc Rolling in the early days

The sheets were transferred with pliers to the other side of the Rolling machine.



Start of Prefab Products

The Prefab production consisted of: Box gutters, suspended gutters (M37/B37 and M44/B44) and downpipes (Ø 70mm, Ø 80mm, Ø 100mm)



Installation Casting Furnace

With the Casting Furnace, blocks of 1500 kilo, in smaller and bigger sizes, were made. Before the blocks were processed at the Hot Rolling mill, they were placed with 40 blocks in one load in the Tunnel Furnace where they were heated up to about 350 °C in a gas-fired furnace. This lasted for 16 hours. When the blocks were at temperature, they were rolled on the Hot Rolling Mill.

1926

1956

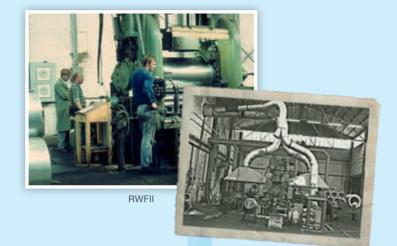
1964

1965



The Achenbach Hot Rolling Mill into operation

The Achenbach Hot Rolling Mill was operational in September 11, 1965. The preheated zinc blocks were rolled on the Strip Rolling Mill to appr. 7 mm thickness and 40 meters long and afterwards rolled into a coil. The side guidance of the Rolling Mill was adjusted each run to the width of the casted block.



Two Cold Rolling Mills RWF I and II were installed

After the Hot Rolling mill, coils were processed at the Cold Rolling Mills. The RWF I was used for the smaller coils, with a width of appr. 950 mm. The rolled material was used for the production of gutters and downpipes. The RWF II was used for wider coils (appr. 1050 mm). This RWF II had a speed of 60 meters per minute, could handle coils up to 3 metric tons and was used for the production of zinc sheets. The zinc coils were rolled to the desired final thickness ranging from 0.3 mm to 1.5 mm. To reduce material tension the sheets went through a sheet roller after cutting them.

Billiton-Maatschappij wordt opgenomen in het Koninklijke Shell-Concern

Billiton-Maatschappij wordt opgenamen in het Ko- nanciële en technologische mogelijkheden van de Heeft men in de ninklijke Shell-Concern.

Op moondag 25 mei 's gvonds om half acht werd onze Ondernemingsraad door de direktie en de Indien de samenvloeiing van de aktiviteiten van dus de heer Delhaise. over een eventuele bundeling von krachten van onderneming die een grote internationale reputabeide concerna

De somenvloeiling van aktiviteiten van de twee concerns heeft voor beide ondernemingen belong- tollurgie en non-ferro-industrie, rijke voordelen.

De huidige ontwikkeling in de mijnbouw en metallurgie en hoor toepassingen leiden tot een voort. over deze fusie, durende, conzientijke schoolvergroting. Doarom Ook voor de K.Z.M. is deze ontwikkeling gunstig

gedelegeerd commissoris de heer Ir. Smid ingelicht Shell en Billiton zol worden gereoliseerd zol Shell gedeningeerd commissional de neer in ande ngenom somen en einen zur worden gedenineerd zur onen over de besprekingen die holden ploots gevonder verstartet integratie in deze industrie bereiken en tussen Billiton-Maatschappij en Koninklijke Shell de voordelen genieten van het someogoon met een Ook ten ganzien van de electrolyse ziet onze di rektie alleen maar gunstiger perspectieven, Mage dus deze nieuwe ontwikkeling ook voor de KZM zijn vruchten ofwerpen. Te dien oanzien tie hoeft on sinds long hoor sporen heeft verdiend in de industriële wereld von de mijnbouw, de meciteren wij de laatste alinea van de direktieverkla ring, von Billiton-Shell, d.d. 27 mei Ll. Tot zo ver de officiéle mededeling

In de dopbloden heeft men meer kunnen lezen

betekent voor Billiton de beschikking over de fi- De voorziening van ertsen is een moeilijke affaire.

Billiton acquired 50% of the shares of KZM, whereby Billiton in turn in 1970 became part of the Royal Shell Group

Kon, Shell-groep een aanzienlijke versterking van ranziers een Billiton/Shell achter zich stoon, dan zol haor potentieel en van haar concurrentie-positie, dit alleen maar voordeliger kunnen werken, al-

> "De direktie van Billiton en Shell verklaren, da de door hun erkende verantwoordelijkheid ten opzichte von het in deze bedrijven werkzome personnel de basis zol zijn voor een beleid dat een gezond leef- en werkklimoot zol bevorderen"



Start production of Special High Great (SHG) zinc

In 1955 the principle agreement to switch from thermal to electrolytic zinc production was taken. With this process increased the production, the purity of the product increased and the production volume could be increased.





Installation BWG machine

The BWG replaced the Flattening machine. By installing the BWG also the work sequence of producing zinc sheets was changed. The machine flattened and stretched the material first and then cut into sheets. In the beginning it produced only zinc sheets. At the end of the eighties zinc coils were also processed, ready for sale. Mid 90's the BWG was modified to gain a larger capacity.



Replacement of the Casting Furnace

The Casting Furnace was replaced by the 'current' Casting Furnace that was still operational until the start of Project Olympus.



Placement Junker Melting Furnace

The Melting Furnace acted as a buffer for the Casting Furnace to be able to quickly fill the Casting Furnace. In this Melting Furnace, maximum 80 metric tons zinc could be melted using solid block zinc as well as liquid zinc. This Melting Furnace was also still operational until the start of Project Olympus.

Headquarters Koramic, covered with NedZink NOVA Composite

NedZink

2000



Due to the complete takeover by Koramic, the rolling activities are completely separated from the zinc smelter. In 1995 NedZink continued its production activities as an independent zinc rolling mill. As manufacturer of rolled titanium zinc for applications in façade cladding, roof covering, roof gutters and rainwater drainage systems.

HILL IN ALL MADE

Installation Mino Cold Mill

The Mino cold mill replaced the RWF I and II. This machine can handle heavier coils and roll at a higher speed. The Mino is running 280 meters per minute and can process coils up to 10 tons. This cold mill is still operational.



Installation Pre-weathered Production Line

The Pre-weathering production line ensured that NedZink could expand the range with the current colours. Due to the phosphorizing process the zinc surface is provided with specific colours.

Introduction NedZink Pre-weathered products

In 2004 the first pre-weathered colour was introduced, named NedZink NOVA. NedZink NOVA has a matte, subtle brushed surface in a natural medium-grey colour.

N





Introduction NedZink NOVA Pro-Tec

NedZink Pro-Tec is process-produced titanium zinc with a protective coating on the backside for application on either cold or damp-proof constructions.

2009

Introduction NedZink NOIR

The second pre-weathered colour was introduced named NedZink NOIR. NedZink NOIR is an anthracite black colour.





Introduction NedZink NUANCE

The first 3 NedZink NUANCE colours were introduced in the pigments Red. Blue and Green.

Introduction

NedZink NEO

ElvalHalcor takes 50% share in NedZink

In 2018 a collaboration was established between Koramic and ElvalHalcor, they are both 50% shareholders in NedZink. This was instantly the kick-off of the ambitious Project Olympus.



The first shovel is put in the ground (Ceremonial start of Project Olympus).

Besides the existing pre-weathered colours a new colour was created: NedZink NEO. NedZink NEO has a matte, subtle brushed surface in a mineral grey colour.



2018

The process

Modernisation of the new plant continuous process

Melting furnace



The melting furnaces are induction furnaces that supply zinc to the continuous casting lines. The furnaces are fed with zinc ingots, alloy, recycled material via a vibrating table. When the zinc has the correct alloy composition, it is transferred to the casting furnace. The melting furnaces melt the zinc via induction (electrical).

Casting furnace



After a certain stabilization time, the zinc from the melting furnaces is transferred via a gutter to the casting furnace.

Continuous caster



Via heated launders the zinc is transported from the casting furnace to the continuous casting installations. The zinc is rolled between two cooled rolls to a thickness of appr. 5.5 mm and a width of 1070 mm. The casted zinc is coiled at coils of 7,5 Mt. Weights of 10 Mt are possible.

Annealing furnace



The coils from the continuous casting lines are heated per six coils in the annealing furnaces to a high temperature. In a cycle of 16 hours the metal structure is made homogeneous. To prevent oxidation, all oxygen is expelled by injecting nitrogen into the furnaces. The annealing furnace is electrically heated.

The process

Cold milling



The coiled zinc material, arriving from the continuous casting building is rolled in various passes on a reversible cold rolling mill to the desired final thickness. In the cold rolling process, a mineral rolling oil is used to lubricate and cool the process. The oil is filtered and cooled in a closed system.

Slitting line



In 2020 NedZink installed a state-of-the-art slitting line and tension leveler. This slitting line can level and slit coils with a weight of 12.5 metric tons at a top speed of 200 mtr/min. The slitting pit is 11 meters deep.

Pre-weathering production line



The material is led through an alkaline degreasing bath to remove oil residues from the surface. Then it is rinsed with demineralized water and the surface is activated to ensure good adhesion of the added layer. During the actual phosphating process crystals are formed on the surface of the zinc. After rinsing and drying an anti-fingerprint coating is added to the surface and the material is foiled and rolled to coils again.

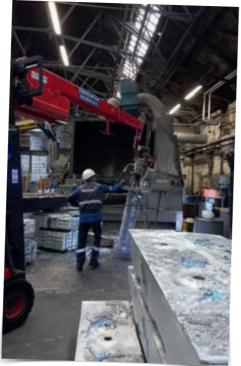


2022



Slab casting

After a thorough start-up period of our new state-of-the-art machinery, the old Junker Melting Furnace, the Slab Casting and the Warm Mill were permanently closed down in June 2022. This is another milestone for NedZink, as we look very positively to the future with our new factory where we can produce titanium zinc in a very sustainable way.



Melting furnace



Together **shaping** the **future with sustainable** hear

Thanks to all NedZink employees for making this possible!





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