

# N.E.P. Chain

## New Environmental Plating Chain

**Corrosion Resistance with the  
strength of carbon steel chain**

- Superior Corrosion Resistance
- Best performance
- ‘Component by Component’
- Environmental Friendly



# N.E.P. Chain

## The ideal partnership

### Strength combined with corrosion resistance

Features:

- Provides the best corrosion resistance in its class
- The same strength as carbon steel chain
- Best performance - designed component by component
- Environmental friendly



### Corrosion resistance that performs better than ever before

#### Superior Corrosion Resistance

Tsubaki tested N.E.P. chain against a leading European brand of corrosion resistant chain in salt water spray tests.



#### Competitor's chain at 100 hours

White rust starts to appear around the pin of the competitor's chain, affecting clearance between components.



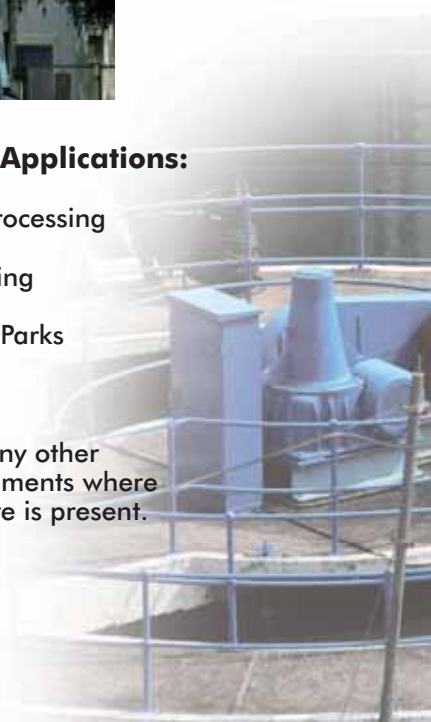
#### RESULT.....

Even after 700 hours Tsubaki N.E.P. chain continued to perform whilst other manufacturer's corrosion resistant chains had either failed or were at an advanced stage of corrosion.

#### Industry Applications:

- Food Processing
- Packaging
- Theme Parks
- Utilities

... and many other environments where moisture is present.



## N.E.P. Chain

# The best performance 'Component by Component'

*Through Tsubaki's research & development program we are able to design & manufacture a roller chain that combines the best performance.*

### Link Plates, Bushes & Bearing Pins

These components have a special, substantial coating applied in order to provide the maximum protection from the operating process or environmental conditions, giving **SUPERIOR CORROSION RESISTANCE** over other processes and manufacturers.



### Rollers

In real time operation, roller contact with the sprocket is the major cause of wear for any forms of protective surface coatings and is therefore a significant contributory factor to accelerating corrosion of the outer surface of the roller.



## Consideration for the environment

Tsubaki is conscious of the effects industry can have on the environment and so N.E.P. chain contains no hazardous substances, so complying with RoHS.



### What is RoHS?

The RoHS Directive stands for the "restriction of the use of certain hazardous substances in electrical and electronic equipment". This Directive was agreed at a European level at the beginning of 2003 and developed to reduce the risks to health and the environment when electrical & electronic equipment is disposed or recycled at the end of its useful life.

The Directive actually came into force within the EU on 1st July 2006.

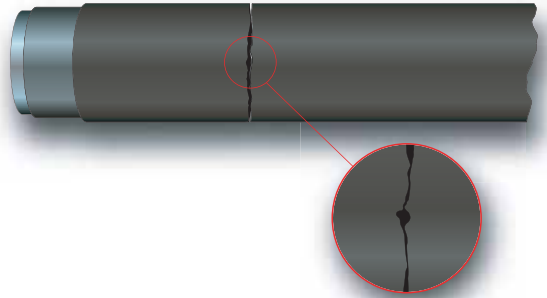
The Directive bans the placing on the EU market of new electrical and electronic equipment containing more than agreed levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) flame retardants-all substances that could cause harm to the environment.

# What problems can occur with corroded chains?

Function	Symptom	Result
<b>Strength</b>	Decrease by deterioration due to corrosion, incl. Pitting Corrosion	Pin/Plate Breakage
<b>Life</b>	Corrodes pin's hardened surface → poor anti-wear performance	Quicker chain elongation
<b>Appearance</b>	Deterioration of material surface	Poor surface finish
<b>Articulation</b>	Stiffness, kicking, bad articulation of roller	Jumping on the sprocket

## Do you have the peace of mind that your application is not being effected by "Pitting Corrosion"?

Unfortunately, it's often a fact of life for maintenance engineers, sometimes the transmission drives are not accessible or there just isn't the opportunity to have such organised planned maintenance. But either way, Pitting Corrosion is a form of extremely localised corrosion that leads to the creation of small holes in the metal which increase in size as the corrosion sets in and if not spotted in time; at best results in reduced chain life and in the worst scenario, chain breakage and possible production loss and or machinery damage.



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