

Global Environment-friendly New Coatings Technology

Non-chrome Chemical Conversion Coatings Technology AT-21

Art Beam Co.,Ltd

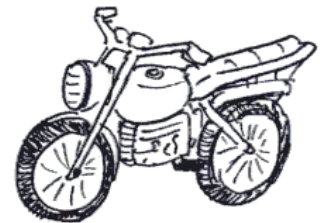
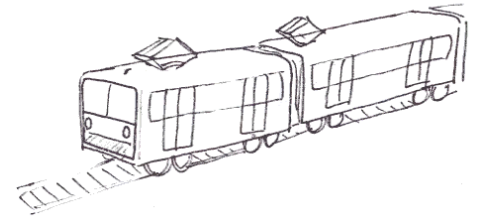
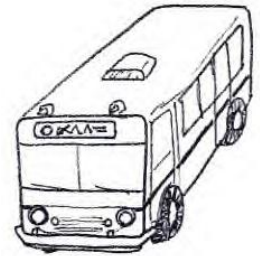
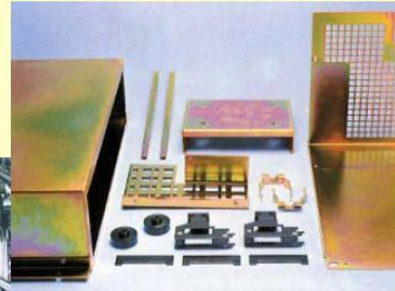
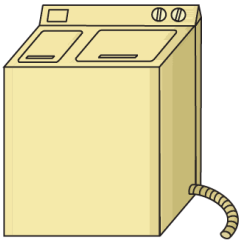
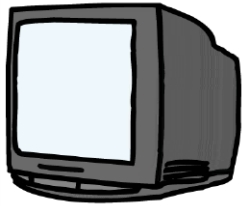
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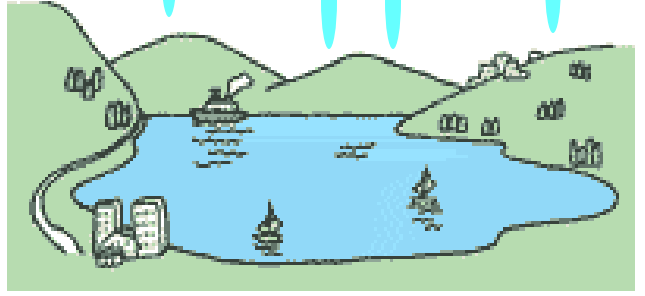
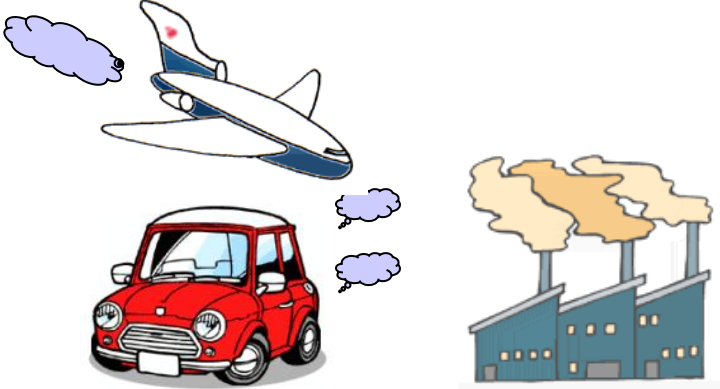
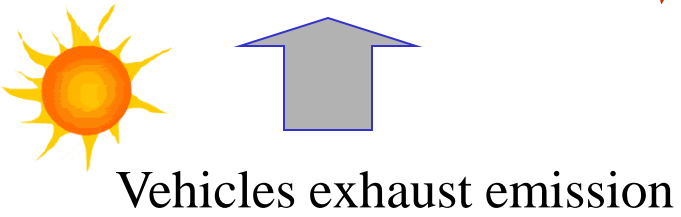
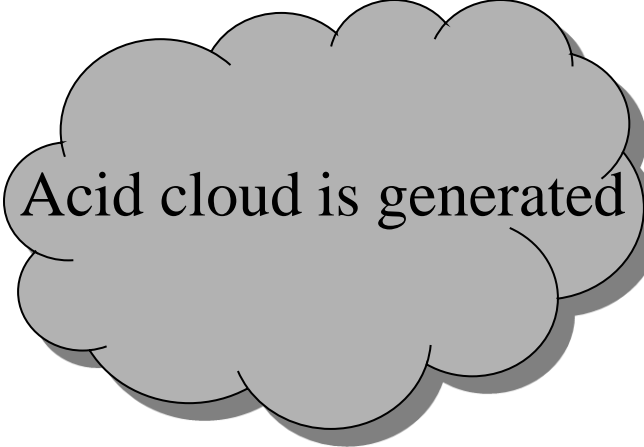
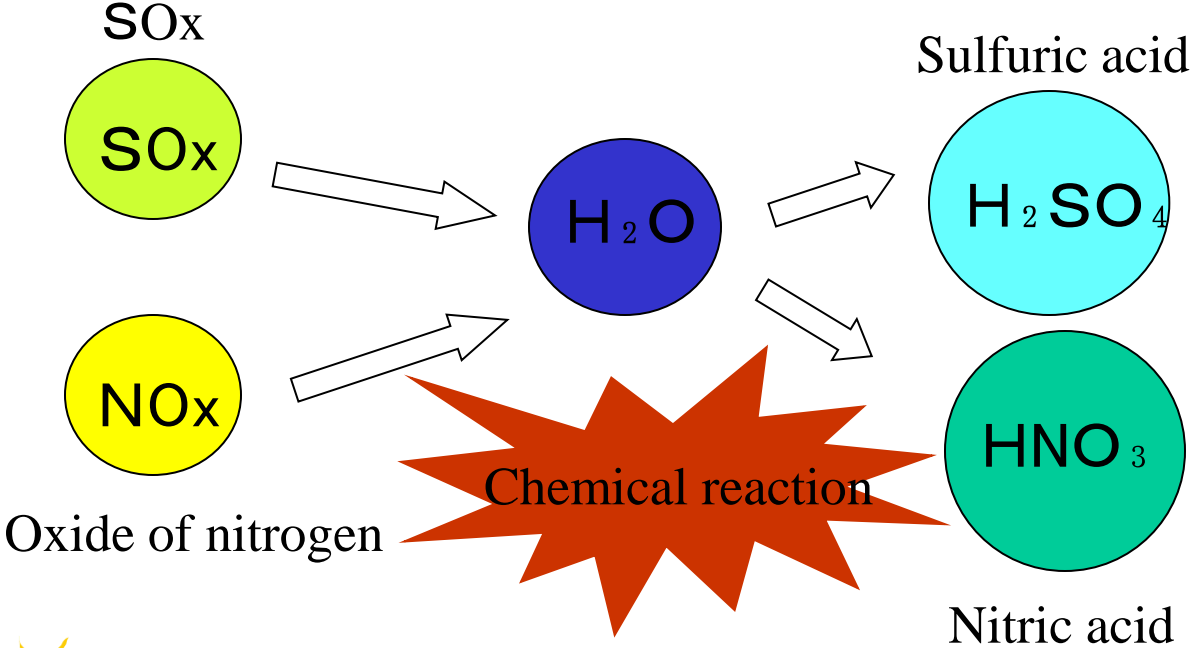
Life goods

Chromate coating processed parts

Corrosion control



Combination with steam in the atmosphere



Influence by acid rain

The tree dies



Discoloration of flower



Dissolution of bronze statue

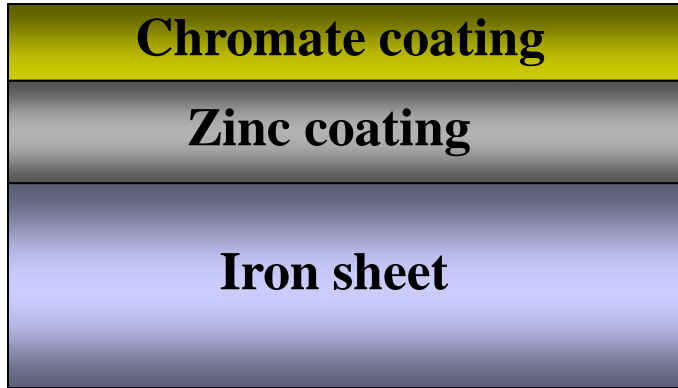


handrail and house

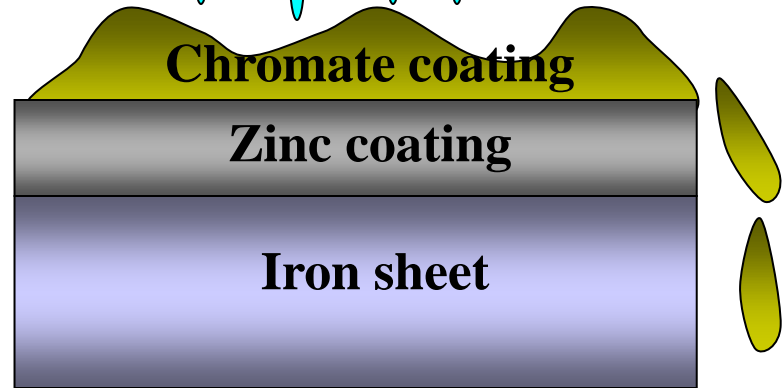


Acid rain

Chromate coated parts

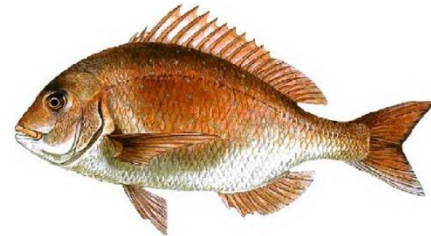


Chromate coating dissolves reacting with the acid rain



The dissolving Chromate flows into the soil(river,lake,sea) and a large influence goes out to our life.

Dissolving Chromate



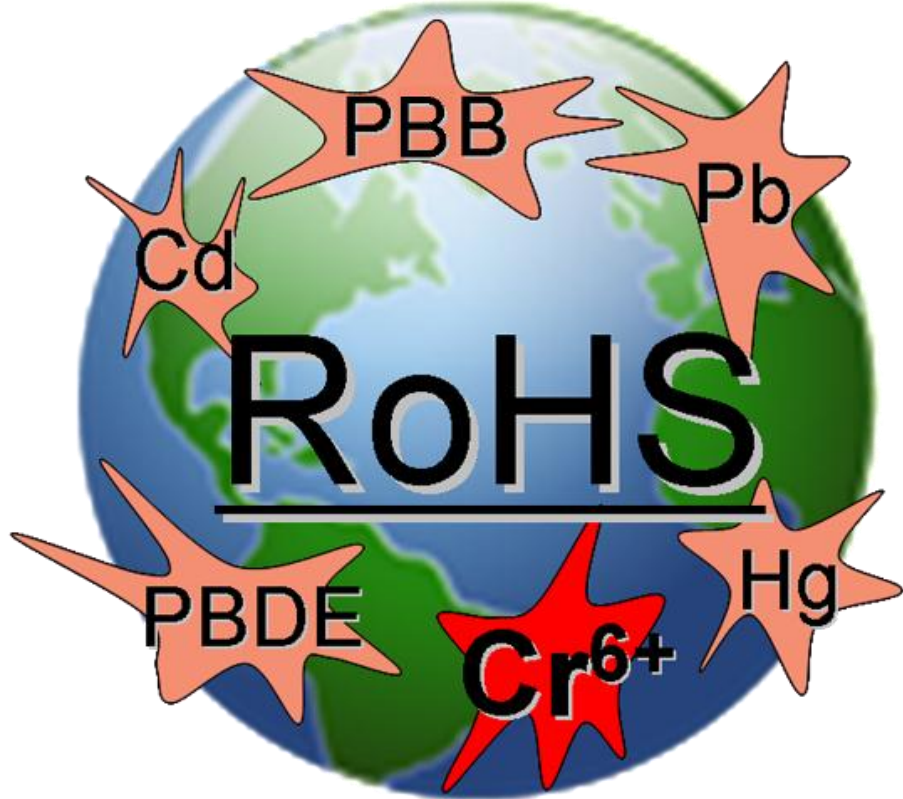
RoHS

Restriction on Hazardous Substances

RoHS (Restriction of Hazardous Substances) adopted in Europe in 2006 regulates the six hazardous substances including Cr⁶⁺.

The object material

- Pb
- Hg
- Cd
- Cr⁶⁺
- PBB
- PBDE

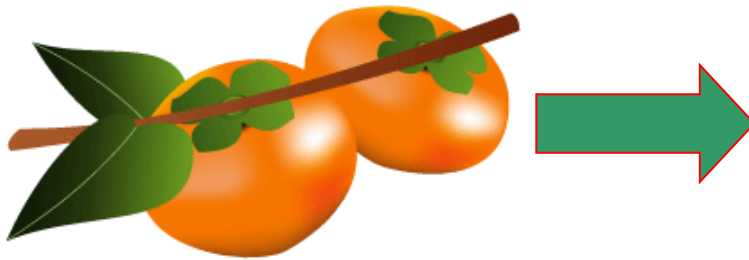


AT-21

Principal ingredient



Persimmon tannin made from astringent persimmon which has anticorrosion property and antiseptic activity.












Astringent persimmon



Persimmon tannin

Comparison between Chromate coating and A-21

	Chromate(Cr^{6+}) coating	Chromate(Cr^{3+}) coating	A-21 non-chrome Coating
Cost	 Very Good	 So-So	 Good
Corrosion resistance	 Very Good	 Good	 Good
Difference of finishing	 Very Good	 So-So	 Very Good

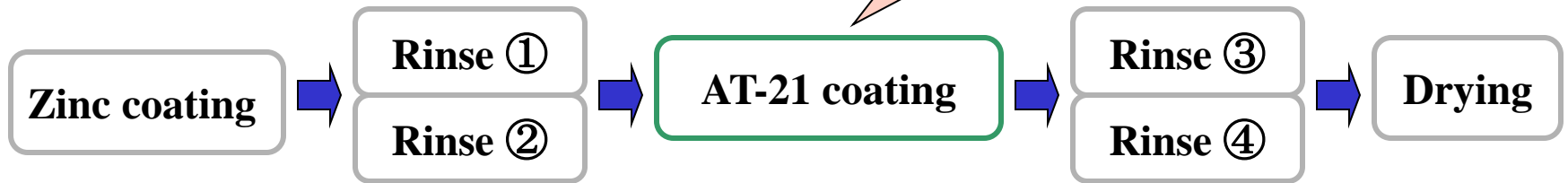
A-21 non-chrome coating has the advantage of Chromate(Cr^{3+}) coating in the cost and the difference of finishing

AT - 2 1 Plating processing line

Chromate(Cr⁶⁺) Plating processing line



AT - 2 1 Plating processing line



The introduction of new plating equipment is unnecessary.

Examples by AT-21



It is said that a major earthquake will occur any time soon. "Well prepared means no worries at any time of need." Let's use inexpensive and safe support metal fittings to reinforce your new buildings as well as your existing buildings.



Corner TaiTung

Retrofitable Earthquake-proof Metal Reinforcement Fittings



Corner TaiTung was devised from the traditional construction method of wood framing, which uses plugs in the details. In old private houses, plugs driven into the assembled parts allowed the assembly to be well-reinforced so as to prevent beams, horizontal members or rails from falling off pillars due to the rolling and pitching caused by earthquakes and strong winds (typhoons). This is a traditional construction method that has been used for 400 years to build Shinto shrines, Buddhist temples and old private houses.

Garage with earthquake-resistance metal fittings




Wire nets to prevent from falling rock and for schoolyard

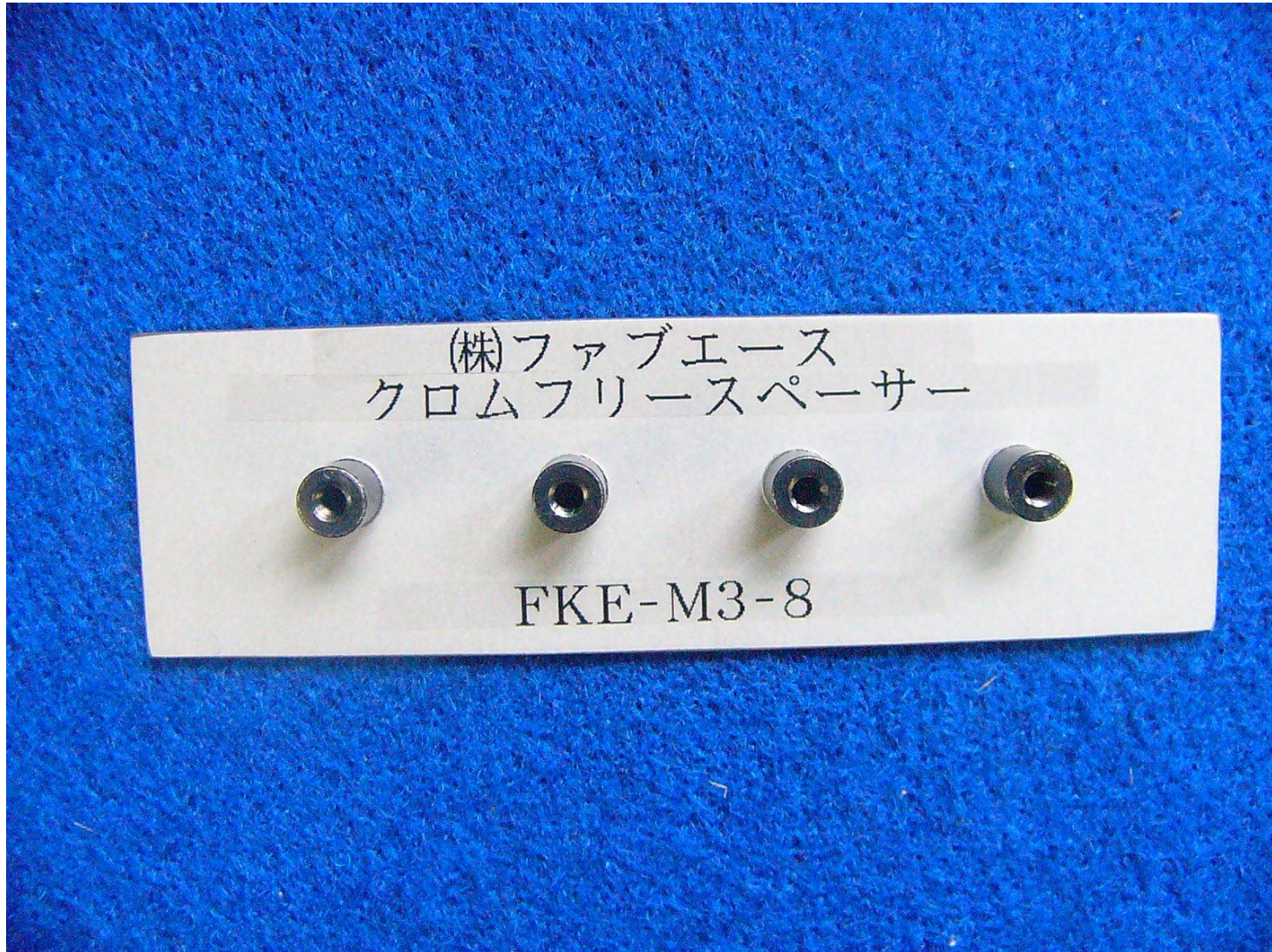
カラーケミトリートコート

(略称: カラーコート)



 株式会社ガルパート・ジャパン

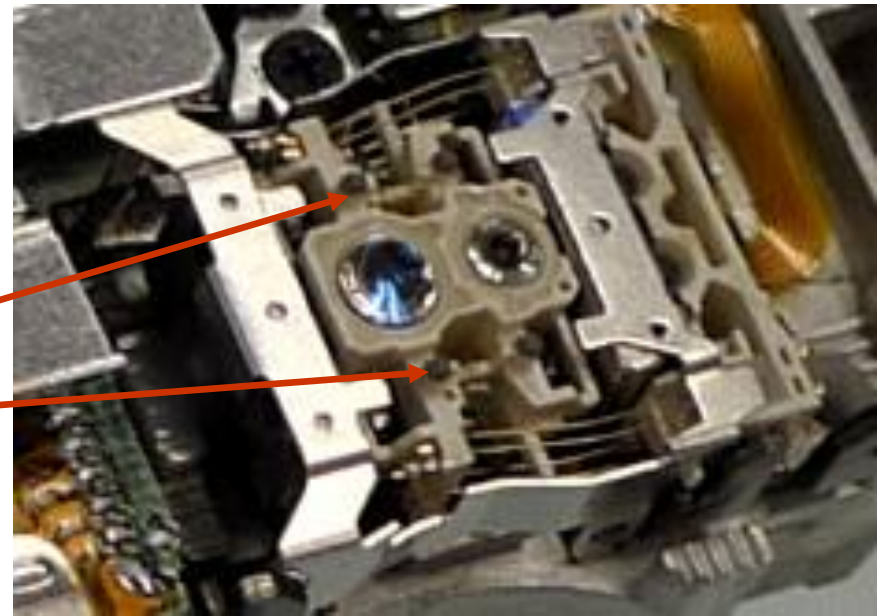
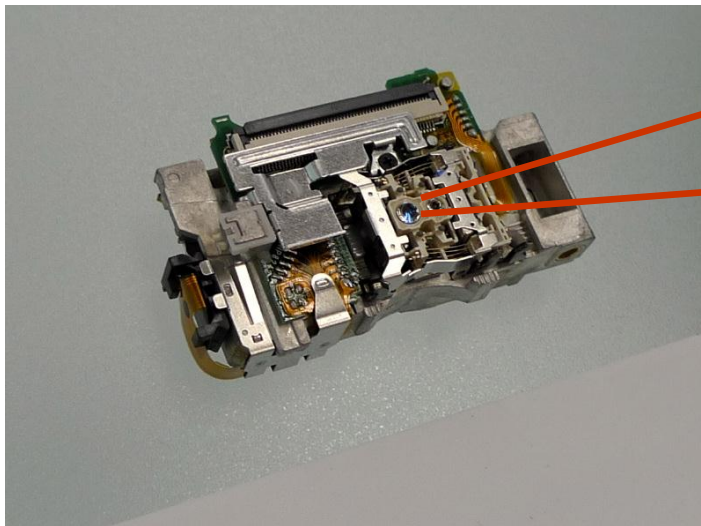
Fastener parts



Sharp "AQUOS Blu ray CD player" 「BD-HDW700」 announced on July 30, 2010



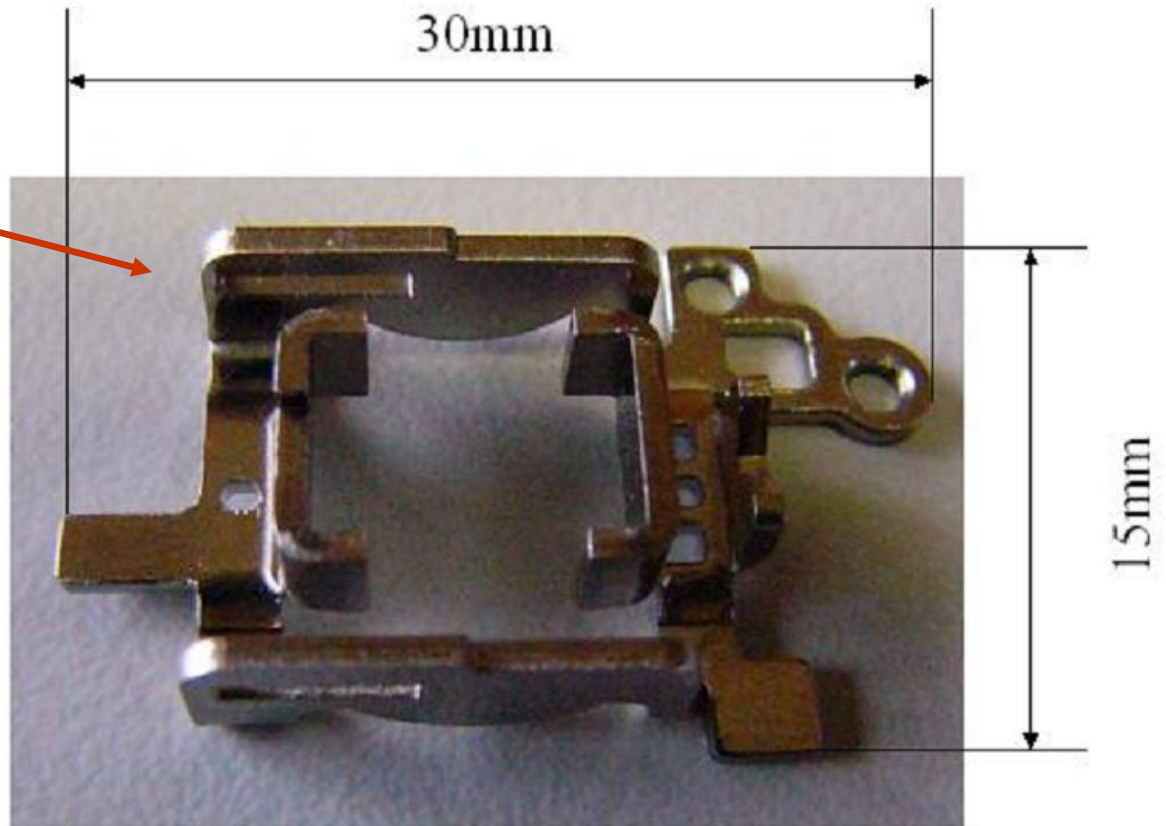
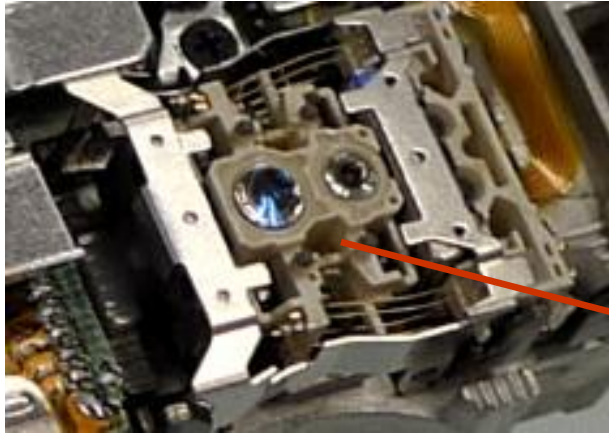
「BD-HDW700」



The AT-21 coating processing is given to this part.

It is a shine picking-up parts of built in to the BD drive.

Parts for Blu ray (DVD)



H=5mm

Weight:2.7g

Summary

AT-21 non-chrome coating

- ① **Global environment friendly**
(Non-chrome compounds included)
- ② **Corrosion**
(Corrosion resistance same as chromate treatment.)
- ③ **Cost**
(AT-21 is cheaper than chrome Cr^{3+} .)
- ④ **The film physical properties are very good.**
(painting adhesion, torque characteristic)
- ⑤ **New plating equipment is unnecessary.**