



MANV PROPRIA

Angular Momentum of Switzerland



The Fascination of Iron
Iron Pocket Watch



Iron pocket watch case, 55.00 mm diameter, rust sealed, sapphire crystal, fitting for cord gold doublee, gold doublee stainless steel back with sapphire crystal, gold dust and black urushi lacquer on the reverse, historical hand-winding movement caliber FHF 96. The dial urushi lacquer imitating „same“ rayskin.

How to prevent iron of rusting

In the days before stainless steel has been invented, iron and later on steel has been known as the hardest metal available. In all cultures a wide variety of products have been produced. Above all it was used for military equipment.

Due to its property to rust quickly, many different methods have been developed to protect the material.

The most common method was the use of oil. Other methods were to heat the iron to produce a protective Oxide layer or to burnish or to blue, which is still used for guns, springs or screws today. Also galvanic methods were used or product have simply been lacquered.

In Japan oiling is still the one and only method to protect precious blades of swords and other cutting tools.

For other iron products such as sword fittings, armors or tea cettles and braziers unique methods have been developed which again had strongly influenced the aesthetic sense of the culture.

The protective rust patina on the pocket watch was achieved in a traditional time consuming and painstaking process as done on iron tsuba.

After forging, sawing, grinding and polishing it was heated to cherry red to produce an Oxide layer. After cooling it was degreased and dipped into a solution of vinegar, water, hydrogen oxide, liver of sulfur and copper sulphate and kept in a closed container for 24 hours.

Then the piece is brushed with a stiff brush to remove the rust fragments from the surface. the process is repeated for one or two weeks until the rust layer has established on the entire surface and no bare iron is visible.

Then the piece is cooked in a strong green tea solution which stopps the rusting process and gives the surface a dark gray to black color. Then with a stick made of deer antler the surface is scrubbed until it is completely free of any rust particles. In a final step the piece is heated and rubbed with wax.

The receipt for preventing iron tea kettels and bracers of rusting is different, instead of producing a rust layer several layers of urushi lacquer was applied and burned into the surface at high temperature over a charcoal fire. This is the way the crown of the pocket watch has been treated.

If well cared, such resistant surfaces will remain for centuries

The tsuba depicted in the background is made in dry lacquer technique imitating an iron tsuba, made by Martin Pauli







