

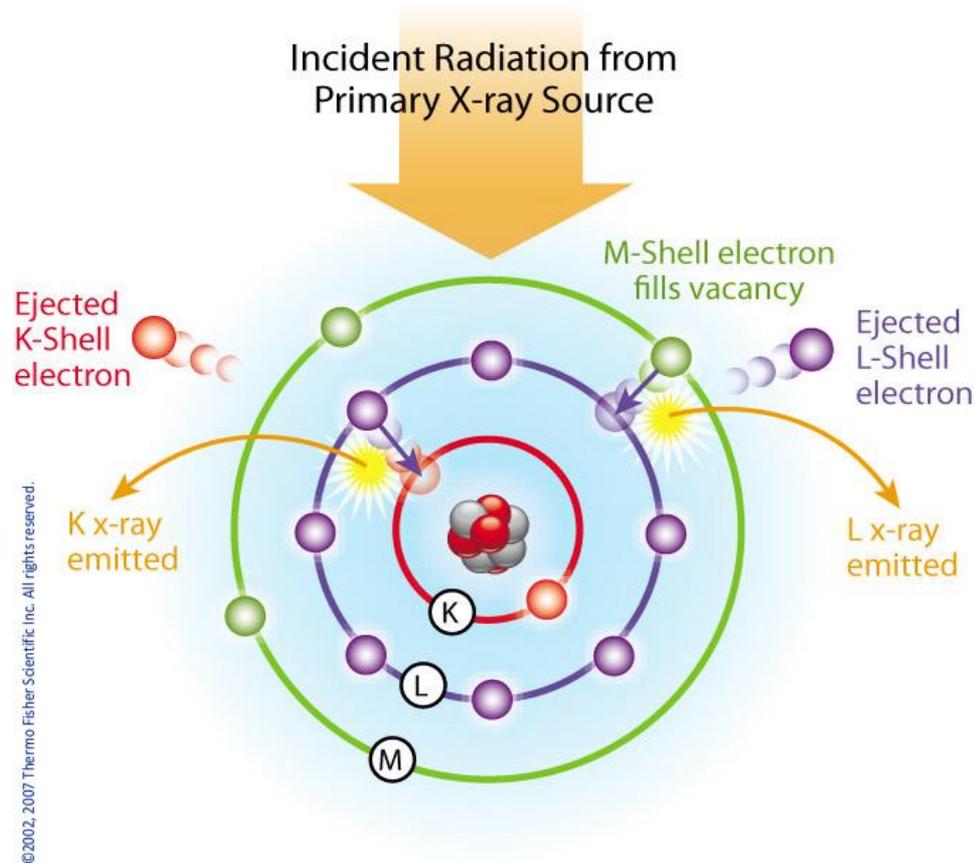
## 2. Radiographic Testing (RT)

- + portability (isotope source), detects both surface and internal discontinuities, can be used for 3d imaging, minimum part preparation, permanent test record
- 2D: highly directional (sensitive to discontinuity orientation), depth of discontinuity not indicated.
- All: radiation exposure safety hazard, must conform to federal and state regulations

# 2. Radiographic Testing (RT)

## X-ray Fluorescence - XRF

Emission of characteristic X-ray radiation by chemical element excited by the primary radiation.



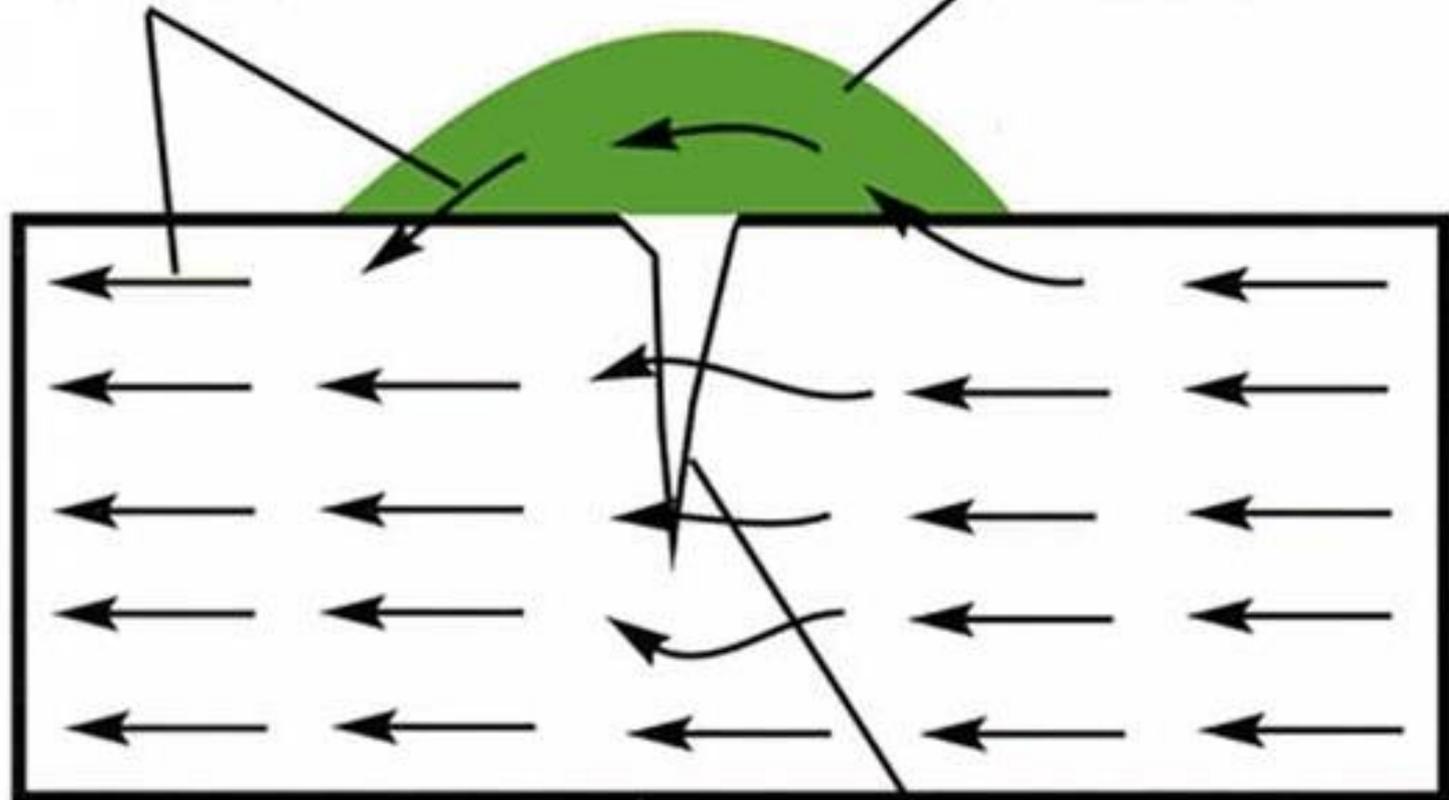


### **3. Magnetic Particle Testing (RT)**

- Uses magnetic field to detect surface and sub-surface discontinuities in ferromagnetic materials
- Field source: permanent magnet or electromagnet
- Imaging: colored / fluorescent ferromagnetic particles in form of dry powder or suspended in liquid

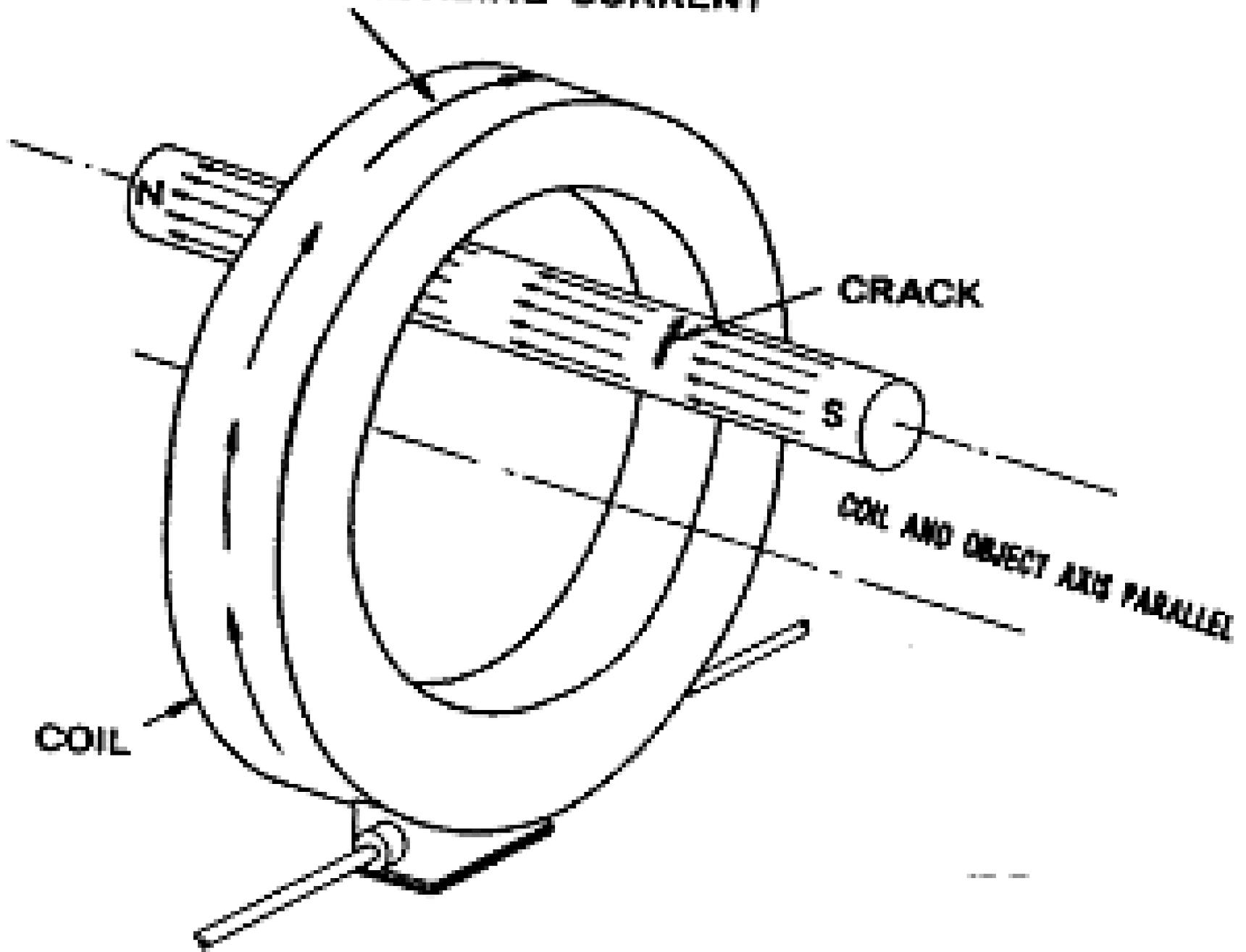
Magnetic field lines

Magnetic particles



Crack

**MAGNETIZING CURRENT**



**CRACK**

**S**

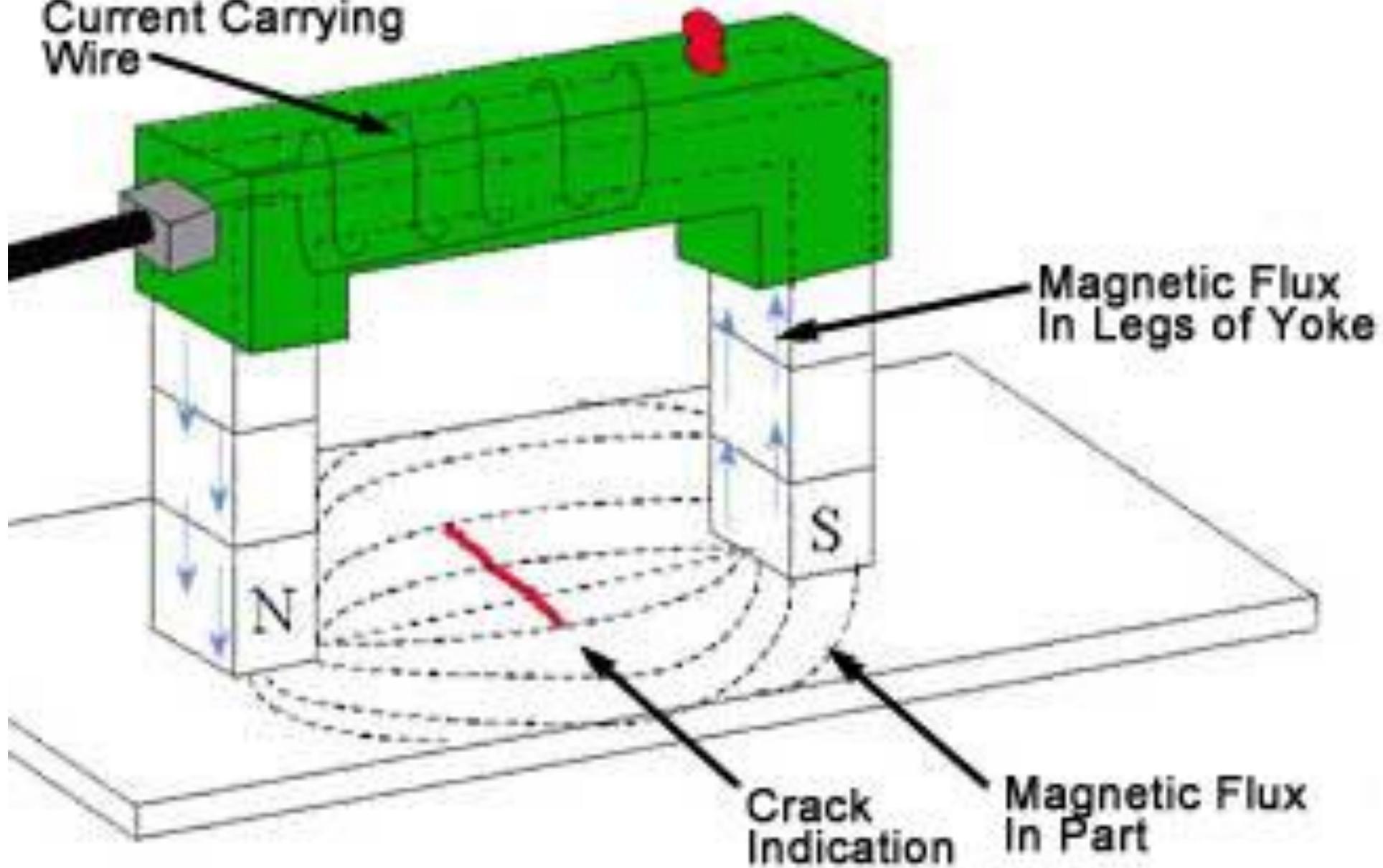
**COIL AND OBJECT AXIS PARALLEL**

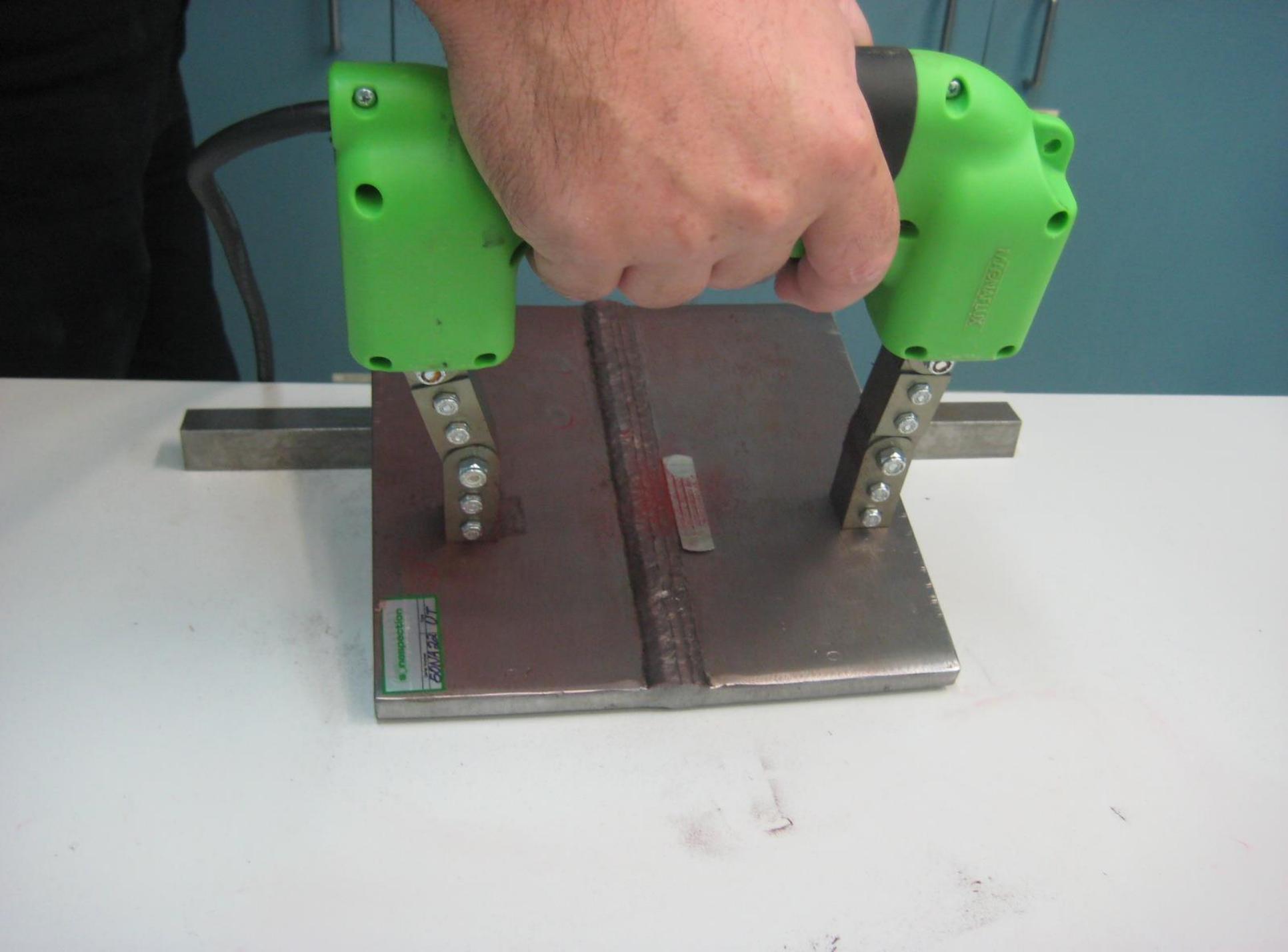
**COIL**





Current Carrying Wire





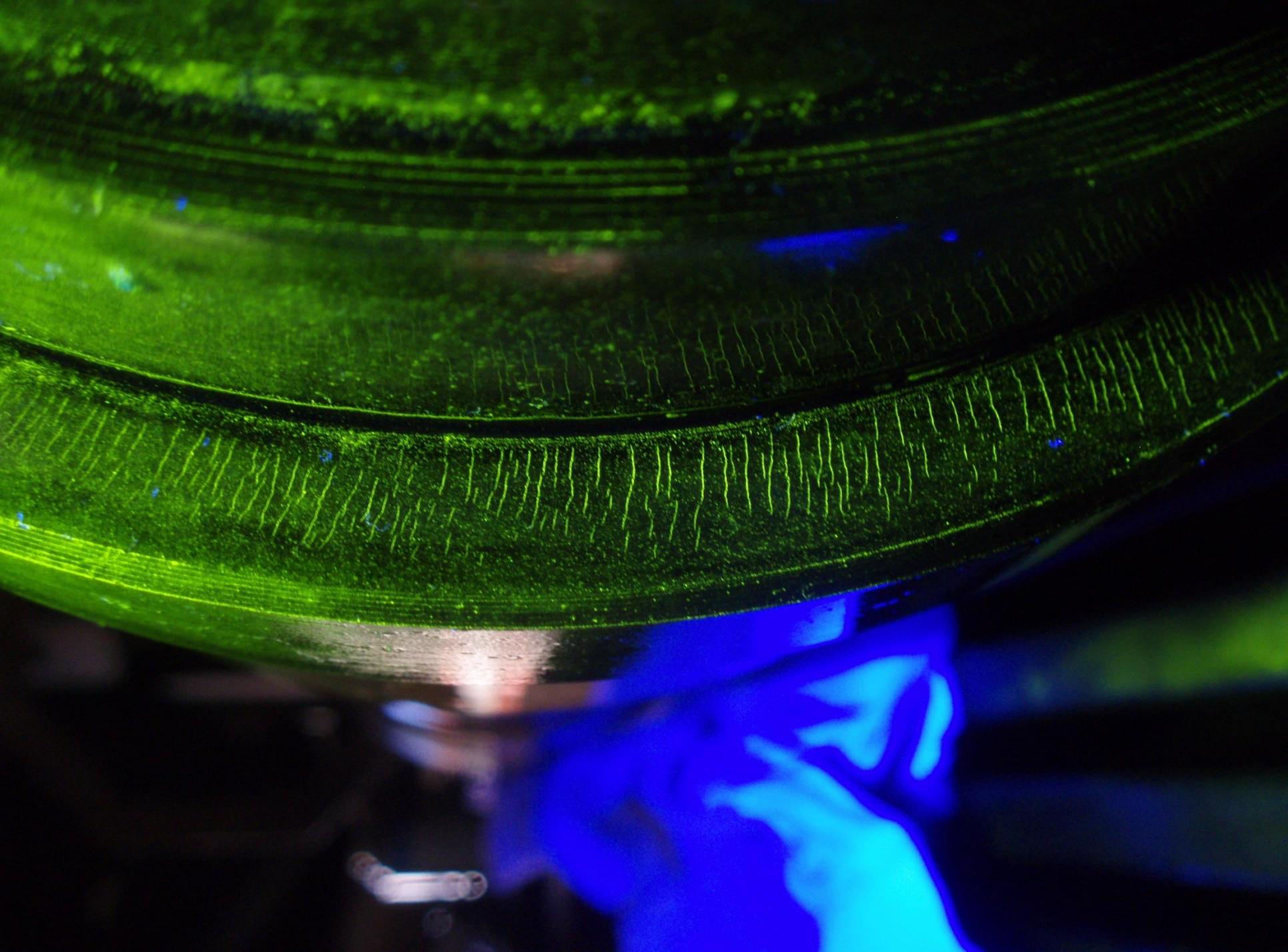




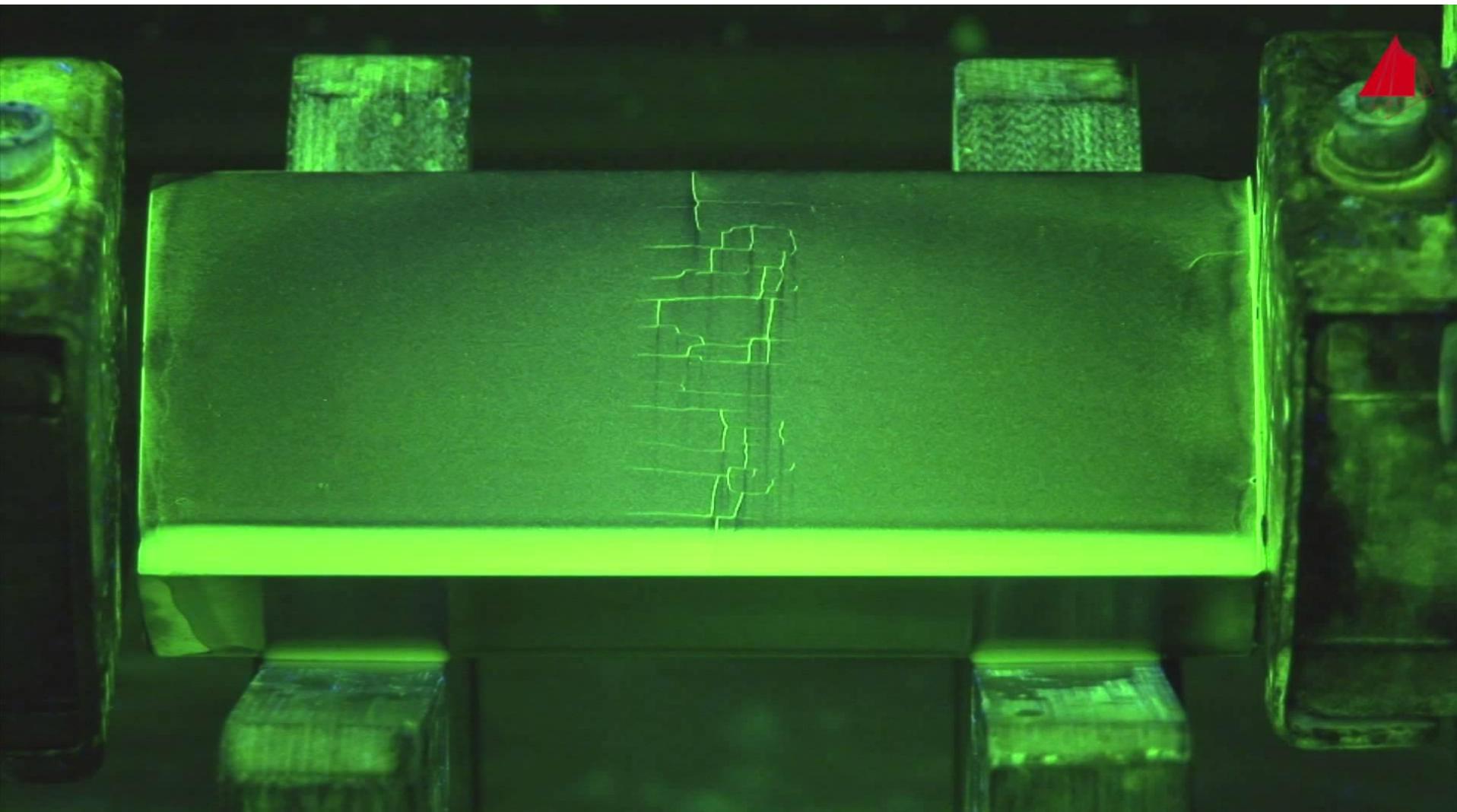


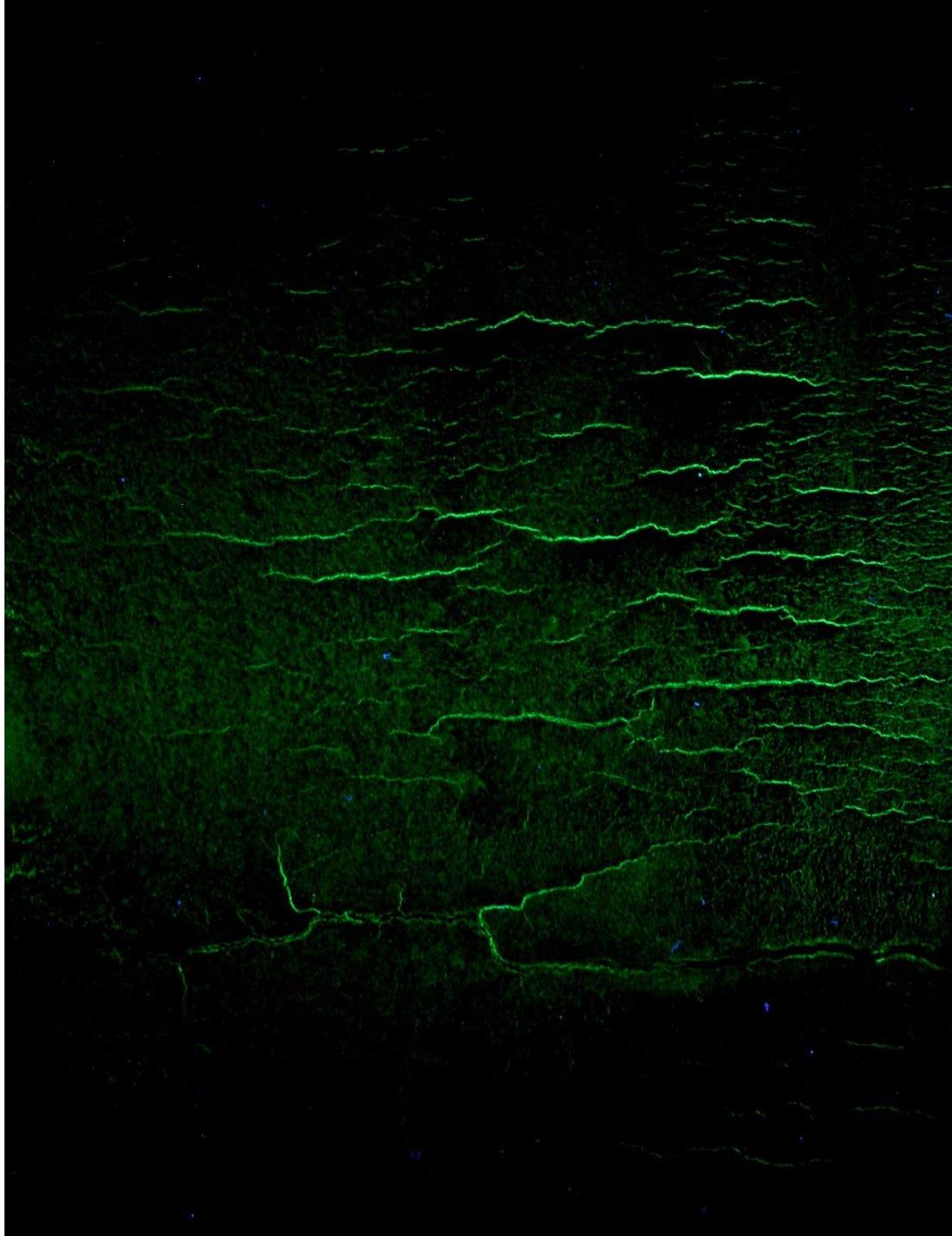










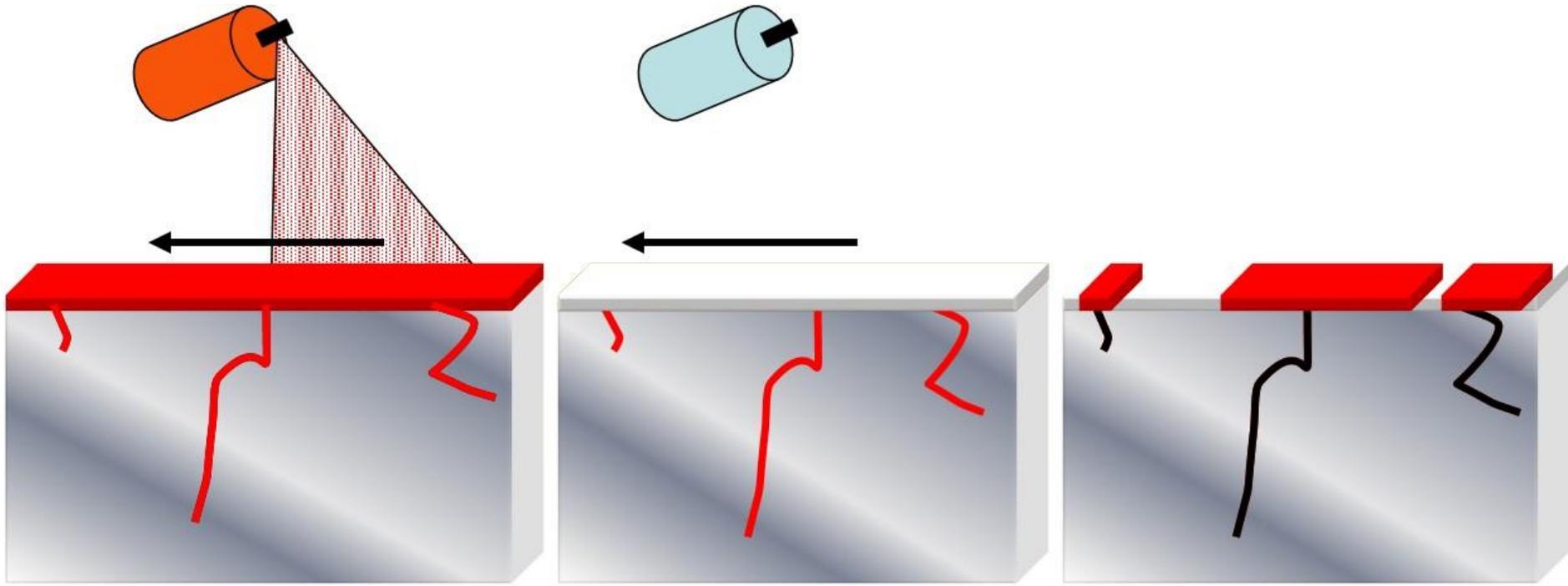


### 3. Magnetic Particle Testing (MT)

- + portable, inexpensive, sensitive to small discontinuities, detects subsurface discontinuities, immediate results, safe
- surface must be accessible and relatively smooth, surface preparation required (degreasing, cleaning), orientation sensitive, ferromagnetic materials only, part demagnetization may be required

## 4. Liquid Penetrant Testing (PT)

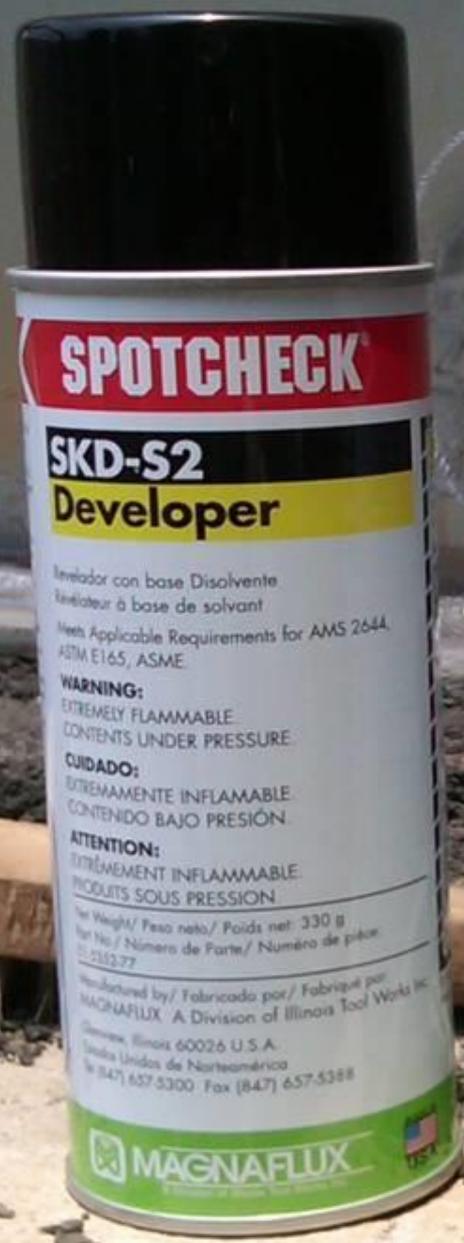
- Low viscosity liquid (dye) penetrates voids open to the surface
- Visible / fluorescent dye – water / solvent soluble
- Cleaning, application, removal , developing, interpretation



**Apply Penetrant**

**Clean then apply Developer**

**Result\***



# SPOTCHECK®

## SKD-S2 Developer

Revelador con base Disolvente  
Révélateur à base de solvant  
Meets Applicable Requirements for AMS 2644,  
ASTM E165, ASME

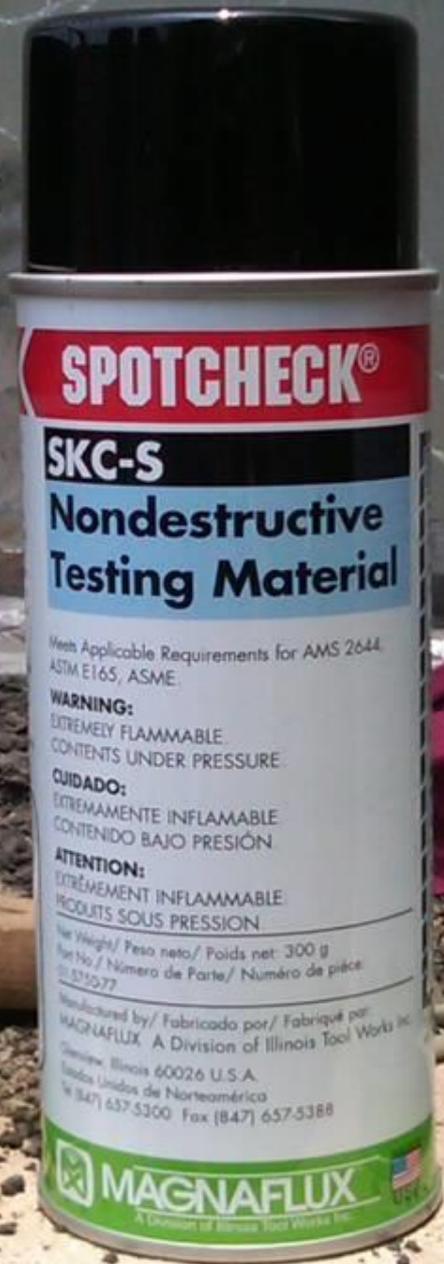
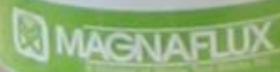
**WARNING:**  
EXTREMELY FLAMMABLE.  
CONTENTS UNDER PRESSURE.

**CUIDADO:**  
EXTREMAMENTE INFLAMABLE.  
CONTENIDO BAJO PRESIÓN.

**ATTENTION:**  
EXTREMEMENT INFLAMMABLE.  
PRODUITS SOUS PRESSION.

Net Weight/ Peso neto/ Poids net: 330 g  
Part No./ Número de Parte/ Numéro de pièce:  
01-5150-77

Manufactured by/ Fabricado por/ Fabriqué par:  
MAGNAFLUX, A Division of Illinois Tool Works Inc.  
Glenview, Illinois 60026 U.S.A.  
Estados Unidos de Norteamérica  
Tel (847) 657-5300 Fax (847) 657-5388



# SPOTCHECK®

## SKC-S Nondestructive Testing Material

Meets Applicable Requirements for AMS 2644,  
ASTM E165, ASME

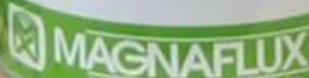
**WARNING:**  
EXTREMELY FLAMMABLE.  
CONTENTS UNDER PRESSURE.

**CUIDADO:**  
EXTREMAMENTE INFLAMABLE.  
CONTENIDO BAJO PRESIÓN.

**ATTENTION:**  
EXTREMEMENT INFLAMMABLE.  
PRODUITS SOUS PRESSION.

Net Weight/ Peso neto/ Poids net: 300 g  
Part No./ Número de Parte/ Numéro de pièce:  
01-5150-77

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# SPOTCHECK®

## SKL-SP1 Penetrant

Penetrante Rojo Eliminable con Disolvente  
Pénétrant rouge visible lavable au Solvant  
Meets Applicable Requirements for AMS 2644,  
ASTM E165, ASME

**WARNING:**  
EXTREMELY FLAMMABLE.  
CONTENTS UNDER PRESSURE.

**CUIDADO:**  
EXTREMAMENTE INFLAMABLE.  
CONTENIDO BAJO PRESIÓN.

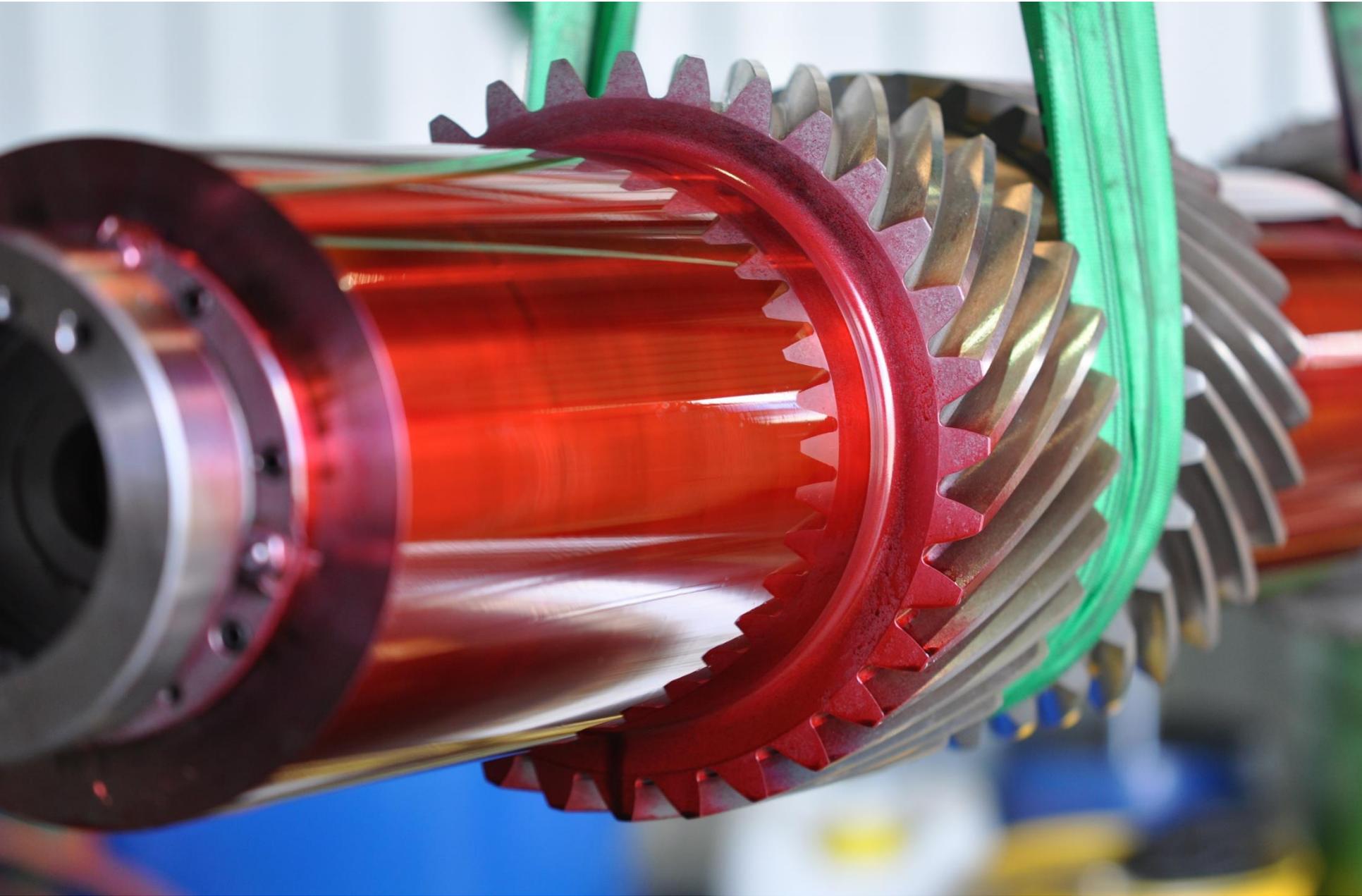
**ATTENTION:**  
EXTREMEMENT INFLAMMABLE.  
PRODUITS SOUS PRESSION.

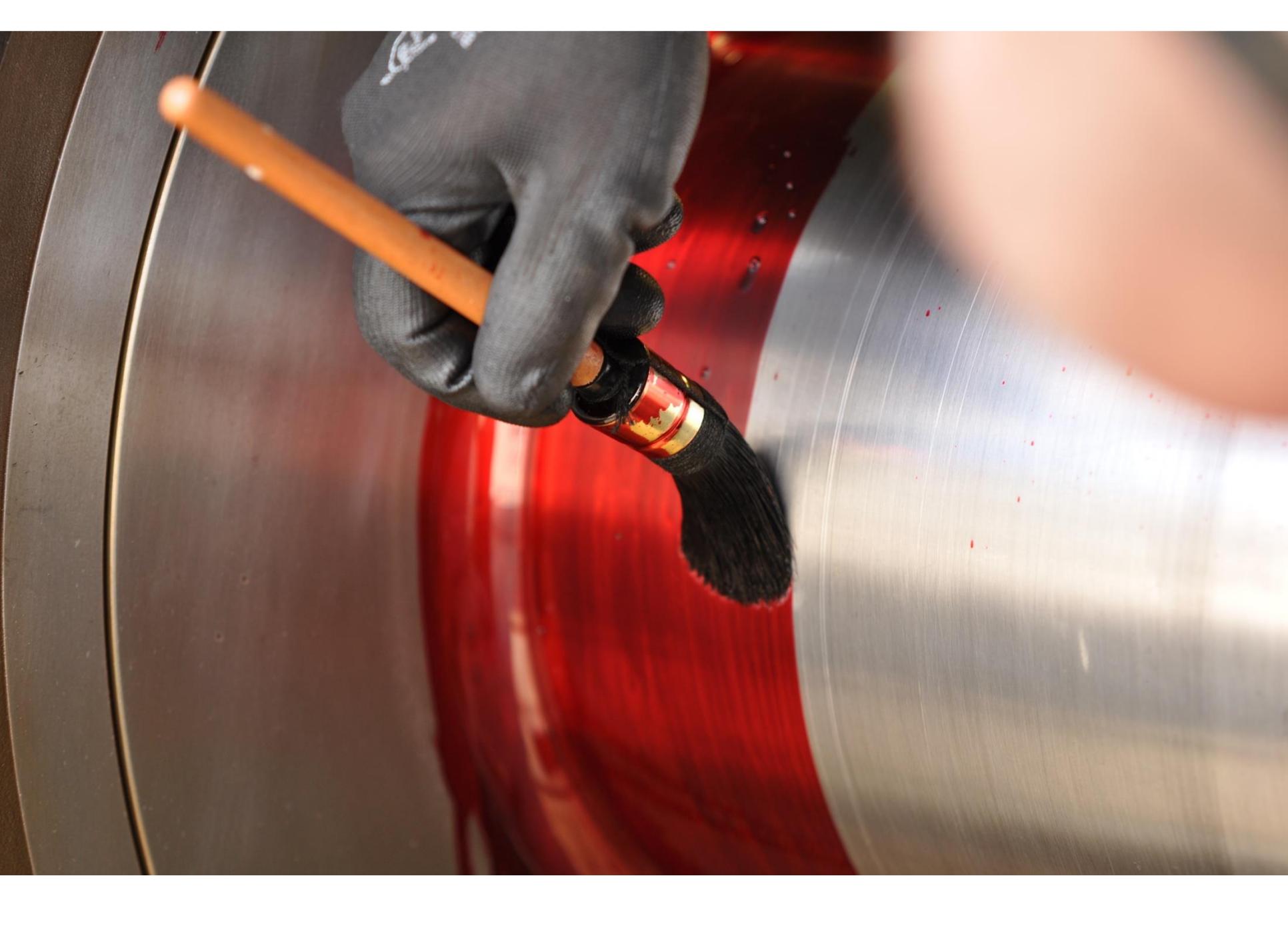
Net Weight/ Peso neto/ Poids net: 300 g  
Part No./ Número de Parte/ Numéro de pièce:  
01-5150-77

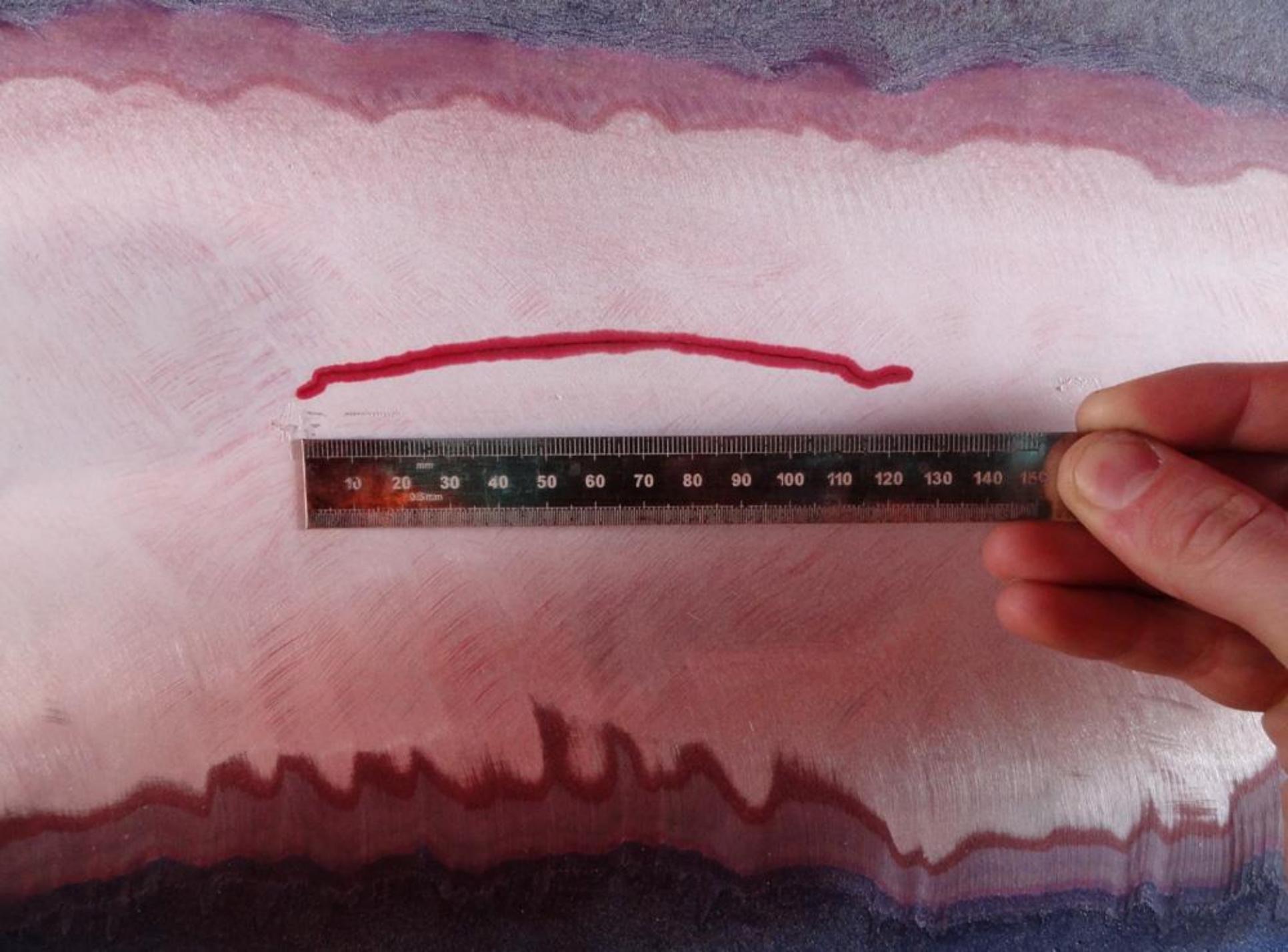
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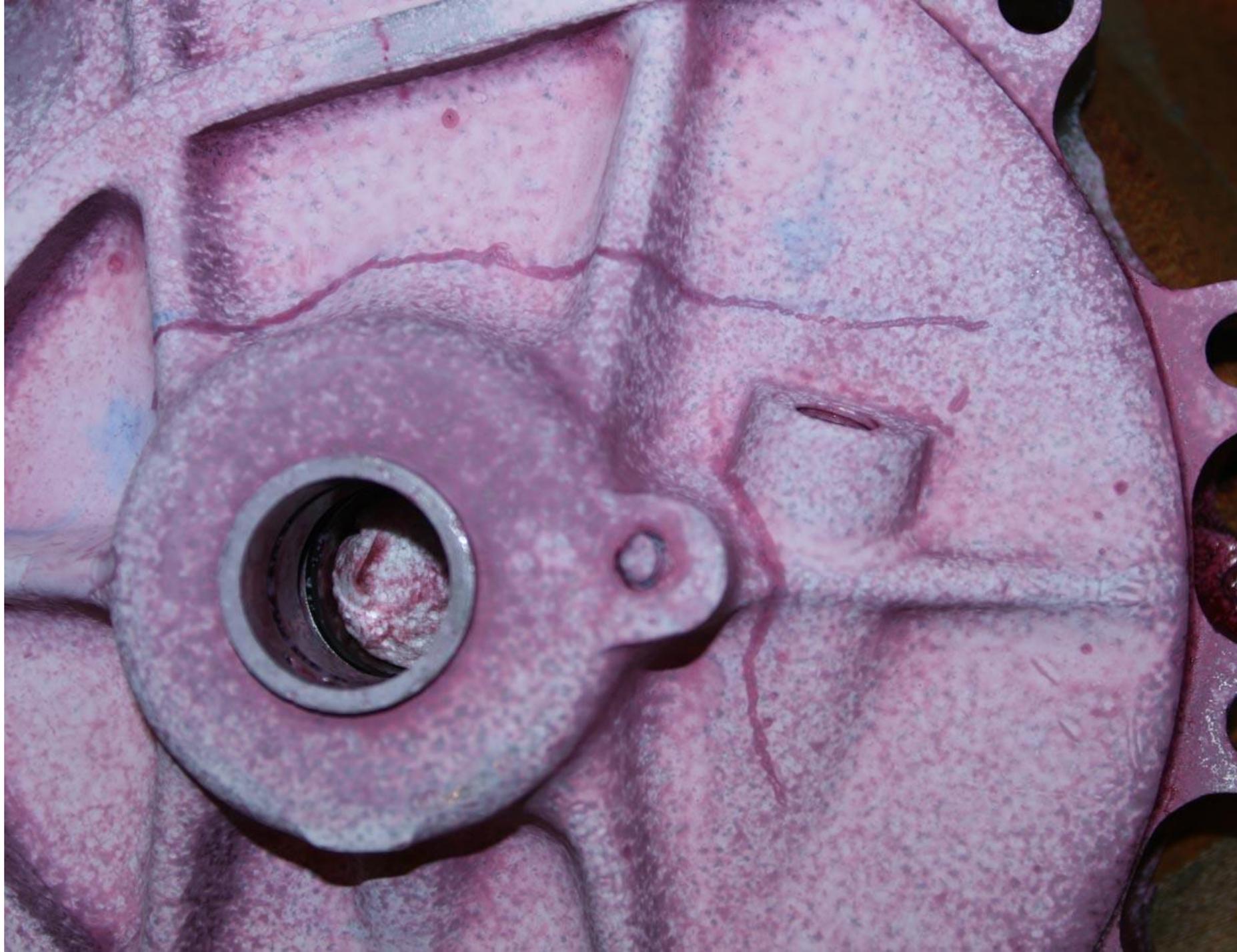






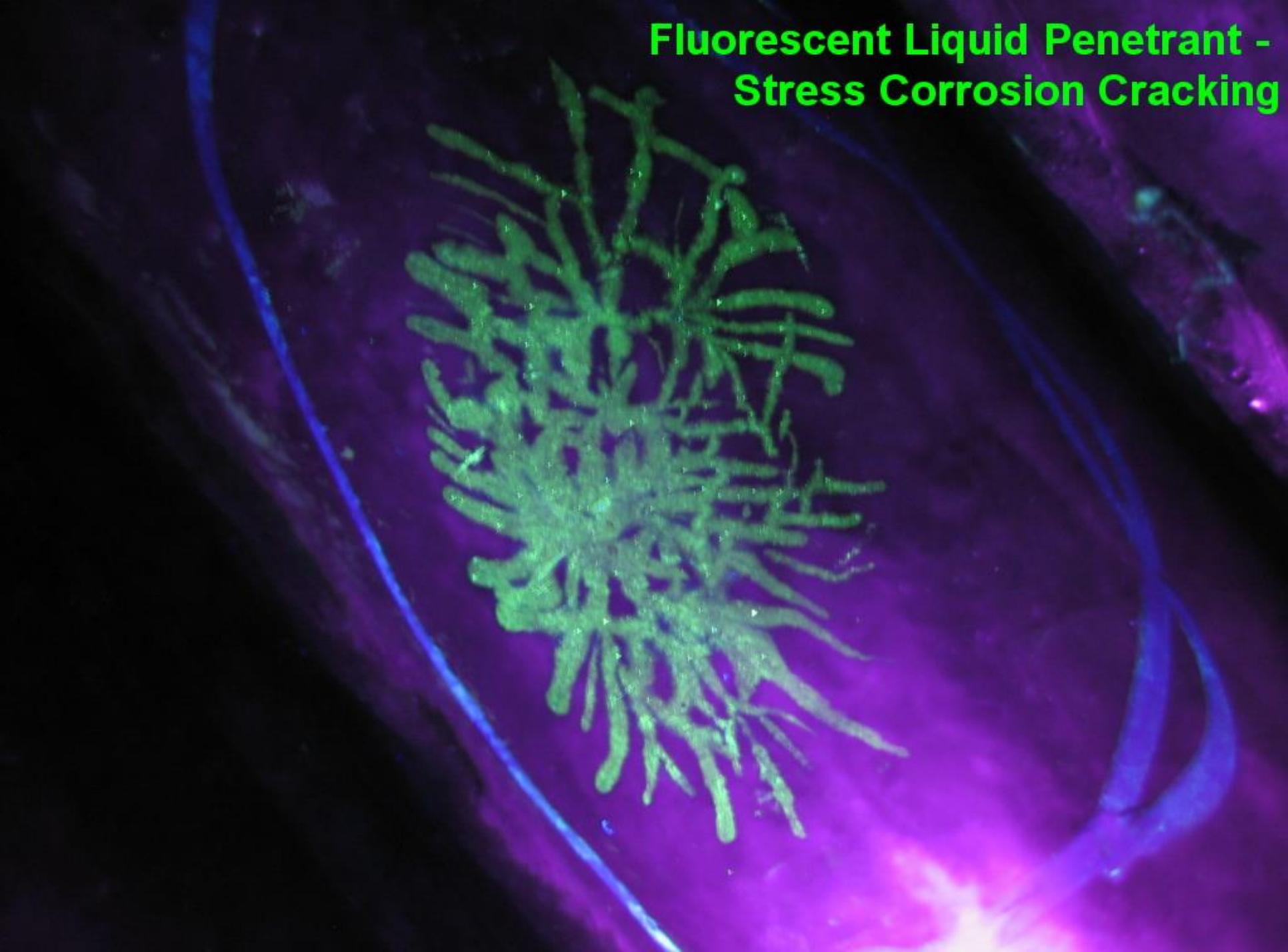








# Fluorescent Liquid Penetrant - Stress Corrosion Cracking







## 4. Liquid Penetrant Testing (PT)

- + portable, inexpensive, sensitive to small discontinuities, short inspection time (~30 min.), safe (ventilation is recommended), minimum skill required, most types of materials can be inspected
- surface discontinuities only, surface preparation required, surface texture (roughness, porosity) may interfere with the test, direct visual detection required