

# AC YOKE-MAGNETIC PARTICLE FLAW DETECTOR TCJE



## Brief Introduction

☞ Magnetic Particle Testing (MPT) is a NDT method used to detect surface and near surface flaws in ferromagnetic materials. The technical principle is that magnetic lines of force (flux) are distorted by the presence of a flaw in a manner that will reveal its presence. The flaw (for example, a crack) is located from the "flux leakage", following the application of fine iron particles, to the area under examination. For near surface defects, the effectiveness quickly diminishes depending on the flaw depth and type. The image is more sharp if the flaw is closer to the surface.

## Features

- ☞ Applied for detecting weld seam of the interior wall of large sphere tank, steel parts and fillet weld
- ☞ Light weight and adjustable distance between magnetic poles
- ☞ Work in AC field for detection of surface and demagnetizing after inspection
- ☞ TCJE-2: adjustable the direction of the probe

## Technical Specification

Model	TCJE-1	TCJE-2
Input power supply	220V/50Hz	220V/50Hz
Output voltage	36V	39V
Magnetizing current	3.5A	5A
Magnetization method	AC	AC
Probe	A	A
Lifting force	Model A ≥ 49N(5kg) Model D ≥ 117.6N(12kg) Model E ≥ 117.6N(12kg)	
Distance between magnetic poles	Model A: 20-160mm Model D: 60-220mm Model E: 100mm Model O: interior diameter 185mm	
Net weight	8.0kg	12.0kg

## Standard Delivery

- ☞ Power box 1
- ☞ Magnetic yoke (≥44N) 1
- ☞ Power cord (30m) 1
- ☞ Black magnetic powder (≥300 mesh) 50g
- ☞ Light bulb (6.3V) 2
- ☞ Fuse (5A) 2
- ☞ Instruction manual 1
- ☞ TIME certificate 1
- ☞ Warranty card 1

# LOW-FREQUENCY MAGNETIC FLAW DETECTOR TCLF



## Brief Introduction

☞ TCLF series summarized the merits of inspection by direct and alternating currents. The flaw-detecting depth is improved by adopting low-frequency electric current, and this pulsating current can enable the slight vibration of the magnetic powder ranks, which facilitates the permutation of the magnetic powder and forms the magnetic mark. It is widely used in the shipyard, aerospace, steel, mill, foundry, weldment or vehicle inspection.

## Features

- ☞ Completely portable single-handed operation
- ☞ Reliable location of defects in ferrous metals
- ☞ The deeper penetrating depth by the magnetic field
- ☞ Find of artificial crackle (0.1 ~ 30mm) at 6mm under the surface
- ☞ Perfect float of magnetic particles for easy to be absorbed on the defects
- ☞ No need to demagnetize after flaw detection
- ☞ Detection directly without any process on the surface

## Technical Specification

Model	TCLF-J50D	TCLF-Z12D	
Power supply mode	AC + low frequency	DC + low frequency	
Max. power	400W	50W	
Output voltage	AC:220V Low frequency: 70-140V	DC:12V Low frequency: 7-36V	
Working current	2.4A ( pulsating current >10A)	2A ( pulsating current >6A)	
DC resistance	8.5		
Probe shape	Horseshoe		
Probe span	50-300mm (Adjustable)	50-200mm (Adjustable)	
Lifting force	≥4.5kg in AC	≥18kg in DC	
Detection depth	3-6mm (Low frequency)		
Frequency of current	Adjustable		
Power	220V AC	Rechargeable	
Dimension	Probe	200mm 50mm 150mm	208mm 48mm 148mm
	Power box	130mm 112mm 46mm	260mm 220mm 100mm
Net weight	Probe	3.6kg	3.2kg
	Total	6.0kg	7.5kg

## Standard Delivery

- ☞ Power box 1
- ☞ Horseshoe probe 1
- ☞ Connecting cable 1
- ☞ Instruction manual 1
- ☞ TIME certificate 1
- ☞ Warranty card 1

