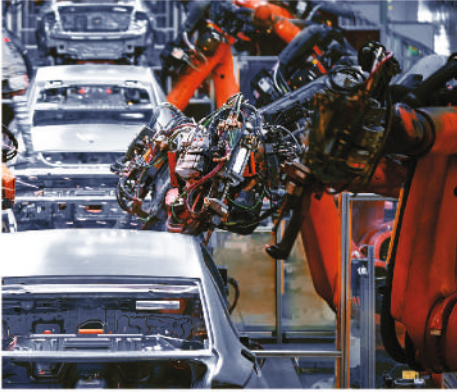




**ALTAIR ENGINEERING
INSPECTIONS PTE LTD**



NDT
MPI | LPI PRODUCTS



ZChek IS THE WORLD RENOWNED BRAND OF ZChem Specialities Private Limited.

ZChek offers complete range of NDT products in Magnetic Particle Inspection & Liquid Penetrant Inspection Techniques. Backed by unique technology, ZChek products are manufactured using world class manufacturing facility. With vital combination of vision to grow, commitment to offer value to the customer and over 50 years of management competence, we are the unique choice for our customers.

ZChem has a strong professional team capable of developing and offering customized products and solutions for various applications. All ZChek products are designed to meet the most stringent requirements of the industry norms across the globe.

**Altair Engg brings advanced
Inspection Technology to your Industry.**



**ALTAIR ENGINEERING
INSPECTIONS PTE LTD**

ZChek - Visible Red Dye Penetrant Inspection Materials

1. PRECLEAN



2. APPLY PENETRANT



3. REMOVE EXCESS PENETRANT



4. DRY & APPLY DEVELOPER



5. INSPECTION



ZChek - PT

Solvent Removable Visible Red Dye Penetrant - Formulated to provide excellent penetrating property.

- Brilliant Color Contrast Red : Excellent visibility
- Perfect Capillary action - Excellent Penetration
- High wetting ability - Excellent coverage
- Non-Halogenated - Safe on all metals

ZChek - PTW

Water Washable Visible Red Dye Penetrant - Formulated to provide excellent Penetrating property

- Brilliant Color Contrast - Red : Excellent visibility
- Perfect Capillary action - Excellent Penetration
- High wetting ability - Excellent coverage
- Non-Halogenated - Safe on all metals



NEW

ZChek - CL

Is a High-performance Solvent Cleaner

- No residue - Good for penetrant action
- Odorless - User-friendly
- Controlled Evaporation - Excellent cleaning & less consumption

ZChek - CR

Is a non-Aqueous Cleaner/Remover designed to offer Quick Cleaning Action

- No residue - Good for penetrant action
- Used for removing ZChek-WP
- Fast action - Lower process time.



ZChek - DL

Is a High Performance Non-Aqueous Developer

- Brilliant White - Excellent Contrast
- Non-Halogenated - Safe on all metals
- High Area Coverage - Less consumption
- Controlled Evaporation - Enhances complete Bleed out



ZChek Dye Penetrant consumables are offered in 1Ltr bulk and 520mL aerosol cans.

ZChek - Fluorescent Penetrant Inspection Materials

ZChek - FP1

Water Washable Penetrant - Level I

- Fluorescent bright Yellow Green under UV Light
- Medium sensitivity
- Non-Halogenated - Safe to use in open areas
- Sensitivity Level - I

ZChek - FP2

Water Washable Penetrant - Level II

- Fluorescent bright Yellow Green under UV Light
- Medium-High sensitivity
- Non-Halogenated - Safe to use in open areas
- Sensitivity Level - II

ZChek - FP12

Solvent Removable/Post Emulsified Fluorescent Penetrant

- Fluorescent bright Yellow Green under UV Light
- High sensitivity
- Non-Halogenated - Safe to use in open areas
- Sensitivity Level - III

ZChek - D90

Dry Powder Developer

- Micronized White powder developer
- Free Flowing, White, Fluffy powder
- High Sensitivity - Detects ultra-fine cracks
- Forms ultrathin film - Enhances indications

ZChek Visible Liquid Penetrant Inspection Consumables confirm to the Specifications of

- ASME Boiler & Pressure Vessel . Section V
- ASTM E1417
- ENISO 3452-2
- AMS 2644
- IS 3658
- NPCIL

ZChek - High Temperature Penetrant Materials

50° - >200° C

ZChek - PH

High Temperature Penetrant - upto 200° C

- No residue - Better Penetrant action.
- No odor - User friendly.
- Fast action - Lower process time.

ZChek - CH

High Temperature Cleaner

- No residue - Better Penetrant action
- No odor - User friendly
- Fast action - Lower process time
- High-temperature Cleaner - up to 200 Deg C

ZChek - DH

High Temperature Developer

- Brilliant white - High contrast.High sensitivity
- Non-halogenated - Safe on all metals.
- High-temperature developer - speed up the inspection process time by eliminating the cooling time.



ZChek - Magnetic Particle Inspection Materials

Dry Method

ZChek - 9D Red

General purpose magnetic powder formulated to form excellent indications of discontinuities at the surface or near surface of the test part.



Wet Method - Non Fluorescent

ZChek - 9E Black

Is black magnetic powder concentrate designed for usage in non fluorescent wet method and on light colored part surface.



ZChek - WP White Contrast paint

This is a blend of solvent and fine inorganic pigments. When sprayed, it provides bright background for magnetic powders, enhancing visibility of indications.



ZChek - NF Red

Is red magnetic powder concentrate designed for usage in non fluorescent wet method preferred for good contrast on gray, black or dark surfaces.

ZChek - 9 Black

Non Fluorescent Powder for Wet method MPI

- High Sensitivity
- High Contrast

Wet Method - Fluorescent

ZChek - F9

Fluorescent magnetic particles specially designed for forging and auto component application.

- Fluoresces bright green - Brilliant Indication
- Low Background - Enhances visibility
- Encapsulation Technology - No loose pigment

ZChek - F9W

Is the blend of fluorescent powder F9 and wetting agent WA. F9W is readily usable with water.

The anti corrosion agents in WA prevent flash rusting of the components.

ZChek - F18

Is high sensitive fluorescent magnetic particles designed to detect ultra fine defects. F18, thanks to its very low particles size offers high inspection reliability.

- Fluoresces Yellow Green - Optimum Indication
- Very low background - Enhances Inspection Reliability

ZChek - F18W

Is the blend of fluorescent powder F18 and wetting agent WA. F18 is readily usable with water.

The anti corrosion agents in WA prevent flash rusting of the components.

ZChek - F18B

F18B - Aquamix is a ready bath liquid concentrate of fluorescent powder, wetting agents and corrosion inhibitors - to be used with water.

ZChek - FB

Is a fine blend of fluorescent magnetic powders suspended in ZChek 801 cart oil at proper concentration and packed in the aerosol can



Water Conditioners & Additives

ZChek - WA-9

WA-9 - General-purpose water-conditioning powder to enhance surface wetting and magnetic particle dispersion stability in water-based magnetic particle suspensions

Carrier Oil/ Cart Oil

ZChek - Z 801

Cart oil is specially formulated carrier fluid for magnetic particle

- High Flash point - Safe
- Low odor - Operator Friendly
- No Background Fluorescence - More Inspection Reliability

ZChek Magnetic particle inspection materials confirm to specifications of

- ASTM E3024
- ASTM E3024M
- ASTM E-1444
- ENISO 9934-2, ASTM E709
- ASME Boiler & Pressure Vessel . Section V, Art 7

Equipment- Magnetic Particle Inspection

We have been leading in exploring and presenting unique NDT systems for all Engineering segments and Aerospace where quality is a priority.

We have carved a niche and made a bench mark in making **MAGNETIC PARTICLE INSPECTION & LIQUID PENETRANT INSPECTION SYSTEM**



ZC Series

Standard & Multidirectional
MPI Bench Equipment
ZC-230
ZC-450
ZC-450MD
ZC-600D



Custom Built MPI

For proposal on custom built



ZM Series

Mobile MPI Power Source for
Prod & CableWrap Method
4000 Amps to 20,000 Amps



Z3 Series

3 Phase MPI Power Source for
Prod & CableWrap Method
4000 Amps to 20,000 Amps



ZP Series

Portable MPI Power Source for
Prod & CableWrap Method
1,500 Amps to 3,000 Amps



DC Magnetising Coils

DC Magnetising coils **Ranging from min 6" Diameter to 20" Diameter** and also custom designed coils as per specification

Major Automotive Customers



BHARAT FORGE



ROYAL ENFIELD



Equipment- Fluorescent Penetrant Inspection

ZC 900B

FPI Booth System

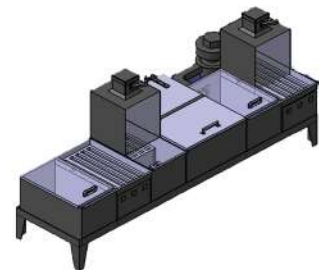
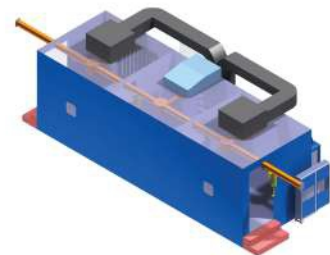
FPI Booth system includes Penetrant Booth, Hot air drier Station, Dry Developer chamber and monorail system with I beam for movement of fixtures from one station to another.

ZC 900

FPI Dip Tank System

Fluorescent Penetrant Inspection Equipment designed to use water washable or post emulsified Penetrant to detect surface discontinuities. Very useful in high volume inspection of medium to small sized parts in Aviation, Aerospace, Engineering or medical implants applications.

FPI system can be custom designed to suit the specific requirements with definite tank sizes with job holding fixtures.



Pre cleaning & Post cleaning system



FPI Dip Tank System



FPI Booth System Electrostatic Spray Type



Ultrasonic Cleaner

Major Aerospace Customers



Accessories



Aerospace



**Aluminium
Test Block**



NI-CR Panel



Tampanel



Automotive



**ASTM Test
Bar for Yoke**



Puffer Bulb



BHEL Test Block



Oil & Gas



Pie Gauge



QCI Shims



**Magnetic Flux
Indicator**



Engineering



Centrifuge Tube



Probe Gauss Meter



**UV/ White Light
Intensity Meter**



Ship Building



MTU Test Block



AS5282 Ring



**Residual Field
Indicator**



**NDT Inspection
Companies**



**Mag Cables
120 Sq.MM**



Lifting Block



Spray Gun

Yokes & UV Lamps

Electro Magnetic Yokes



ZC-9

AC Electromagnetic Yoke

Lifting Capacity: 4.5 KG
Yoke Weight: 2.4 KG
Input Supply: 220/110V



ZC-9D

AC/DC Electromagnetic Yoke

Lifting Capacity: 22.5 KG
Yoke Weight: 3.5 KG
Input Supply: 220V



ZC-9M

Permanent Magnet Yoke

Lifting Capacity: 18 KG
Yoke Weight: --
Input Supply: NA

UV LED Lamps



ZUV-4

LED Battery Operated

UV-A 365
Intensity : $\geq 8,000 \mu\text{W}/\text{cm}^2$



ZUV-20, 30, 48

LED Flood Lamp

UV-A 365
Intensity : $\geq 10,000 \mu\text{W}/\text{cm}^2$



ZUV-6

LED Hand Lamp

UV-A 365
Intensity : $\geq 6,000 \mu\text{W}/\text{cm}^2$

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