

MEGA CHECK (SET)

Coloring Penetrant Detection Agent for Crack Detection

Aerosol 450ml/can



Nondestructive inspection has become more important in airplane industry, machine industry, metal industry, shipbuilding industry, welding industry, resin industry and nuclear power plant. Also, the inspection is widely used. However, conventional nondestructive inspection requires expensive equipment and special technologies due to the problems of inspection method using γ -ray, X-ray, supersonic wave and magnetism, so that it could be used only in some places. Mega-Check Coloring Penetrant Detection Agent is one touch type aerosol. It is easy-to-use and continuous. The produce ensures user-friendliness and clean post-treatment needed by contemporary society. Unlike existing inspection method requiring 'expensive equipment' or 'special technologies', it is a differentiated product capable of detecting cracks correctly and easily by way of easy use. It is highly portable and can be used anywhere anytime. Its use is increasing. The product lineup is composed of product using specially refined materials and other products showing low-toxicity and acceptability for meeting consumer needs.

Liquid Penetrant Test is mainly used to detect flaws open to the surface. It is drawn into any cracks via capillary action to make visible the discontinuity which is invisible to the human eye. There are several kinds of testing method depending on materials of penetration or development, but solvent removal method of dye penetrant testing is mostly used in operation/production sites.

Uses

It can be used for nonferrous materials like porcelain, glass, synthetic resin as well as metal, iron, nonferrous metal, magnetic substance and nonmagnetic substance.

Casting parts ----- pin hole, scalding flaw, shrinkage flaw.

forging parts ----- forging flaw.

Weld ----- crack, failed joining.

Metal materials ----- grinding flaw, heat flaw, cutting tool crack.

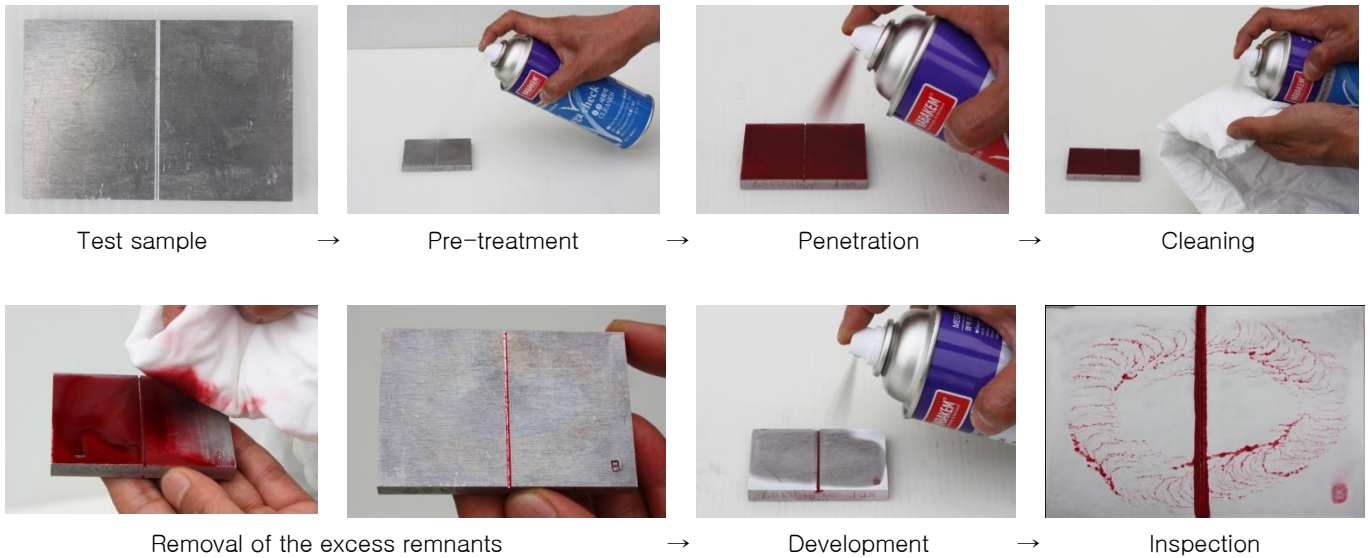
Leakage check -- tank, boiler, pipe etc.

How to use

Coloring Penetration Detection Method discovers invisible flaws easily by making red penetrant liquid penetrate into surface flaw areas of inspection object, removing residual red penetrant liquid with cleaner, and developing red penetrant in flaw areas by using white developer and capillary phenomenon.



Everyone can use the detection method by following operations.



1st Pre-treatment

The dirt like dust, oil content, coating materials and rust prevents penetration of red penetrant. Remove them completely with cleaner before inspection. Be careful of pre-treatment method to prevent surface flaw areas from being clogged. The more perfect the pre-treatment is, the higher the detection effects are and the easier the inspection operations.

2nd Penetration

Clean the inspection object surface and dry it. Apply red penetrant evenly 20~30cm away from target object to make the surface covered with the penetrant. Penetration time is 2 ~ 3 minutes. Application at the intervals of 3 ~ 6 minutes ensures better effects. Recommended temperature of parts for inspection is about 10 ~ 40°C. When you do this inspection work outdoors in winter, it is recommended that you should lengthen penetration by about two times to obtain better penetration effects.

(Also, as soluble penetrant is available, water rinsing is possible and onsite use is very easy.)

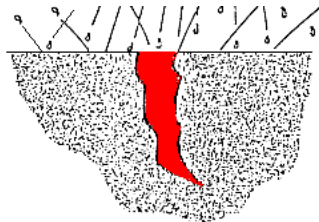


(a) Penetration



3rd Cleaning

After penetration treatment is done, remove red penetrant remained on the inspection object by using dry dust cloth, tissue paper, other absorbents or water rinsing (in case of water soluble penetrant) and clean the object with dust cloth containing cleaner or tissue papers. If weld with surface not smoothed or inspection object with black film of steel and casting products are not cleaned completely, and red penetrant is remained on their surfaces, it is difficult to determine flaws correctly in developing. Use white or near-white dust cloth or tissue paper to know cleaning degree easily. Do not apply it directly to the surface of inspection object.



(b) Removal of the excess remnants

4th Development

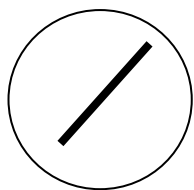
After cleaning red penetrant remained after penetration, apply white developer evenly to make it cover whole surface. Applied white developer is dried immediately, showing white color. As it dries, red penetrant in flaw areas is absorbed and appeared, making the position and shape of flaw marked sharply on the white powder phase. Shake white developer light before use.



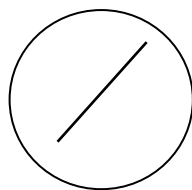
(c) Development

5th Inspection

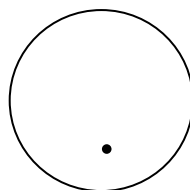
The areas not showing red after development means that they have no flaws. Determine the kinds, size and depth of red stained areas on the basis of their shape and size. The kinds of flaw created by color fixations can not be determined by a single word, but we can show them as following.



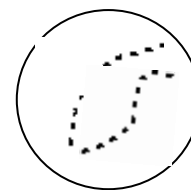
Appreciable Crack



Fine Crack



Cavity



Crack due to fatigue
(initial stage)



Cautions

Do not spray directly onto the face or food. Do not inhale or intake.

Keep it out of the reach of children.

As this is an inflammable product using high pressure gas, keep the following cautions carefully.

1. Do not spray directly toward open flame.
2. Do not use it near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
3. Do not use it in an environment where there are explosive or inflammable materials.
4. Store the product in places where the temperature does not exceed 40°C.
5. After used in enclosed areas, be sure to ventilate.
6. Do not throw into a fire.
7. After use, throw it away after checking and removal the remaining gas in the container.
8. Do not store it in enclosed area.
9. Below 5°C, injection power may be poor.

※ This information can be amended without any notice according to new knowledge and test result. If there are any questions, please contact us or the store where you purchased it.

