

ZP-14A

WATER SOLUBLE DEVELOPER 水溶性显像剂

ZP-14A developer is used to complete the liquid penetrant inspection process. ZP-14A is mixed with water. The tank does not require agitation once the ZP-14A is prepared. Following application, the part is dried with warm air. Advantages include bright and highly defined indications, and can be cleaned with water. ZP-14A is recommended for use with ZL-2C, ZL-27A and ZL-37 post-emulsifiable penetrants.

ZP-14A用于液体渗透检测工艺,使用时先与水混合搅拌。当ZP-14A溶于水后即可停止搅拌。使用前待检零部件需要暖风吹干。ZP-14A有很多优点,包括可以显示出明亮清晰的缺陷显示,并且可以直接用水清洗。ZP-14A推荐配合ZL-2C,ZL-27A和ZL-37等后乳化渗透液使用。

ZP-14A is listed on the QPL SAE AMS 2644 Qualified Product List.

ZP-14A已被列入QPL SAE AMS 2644合格产品目录。

BENEFITS 优势

- Bright, highly-defined indications
明亮清晰的缺陷显示
- Can be cleaned off with water
可直接用水清洗
- Even, uniform coverage
覆盖均匀

SPECIFICATIONS COMPLIANCE 符合规范

- AECL
- AMS 2644
- AMS 2647
- ASME
- ASTM E1417
- ASTM E165
- Boeing BAC 5423 PSD 6-46 or 8-4
- GE P3TF2
- MIL-STD-2132
- MIL-STD-271
- QPL SAE AMS 2644

APPLICATIONS 应用

Defect location: open to surface

缺陷位置: 表面开口缺陷

Ideal for 适用于

- Castings 铸件
- Forgings 锻件

Defect examples 缺陷类型

- Cracks 裂纹
- Porosity 气孔

PREPARATION INSTRUCTIONS 配制指南

Developer tank should be clean before developer bath is mixed. Fill the tank with the appropriate amount of water and slowly add the appropriate amount of developer powder to the water while stirring or agitating bath until it is completely dissolved. Once the powder is dissolved, agitation is not required to keep the developer particles suspended. To speed up bath preparation, warm water can be used, however developer bath temperature should never exceed 120°F / 48°C. Developer powder is dusty and use of a simple filter mask may be desirable during handling.

使用前显像剂料槽需要彻底清洗。在料槽中加入适量的水并开始搅拌,同时缓慢添加适量显像剂粉末,持续搅拌直到显像剂完全溶解。当显像剂溶解后不再需要搅拌。如需加速显像剂溶解可以使用温水但请注意水温不能超过48°C。显像剂粉末非常容易产生粉尘,在使用时可能需要适当的面具防护。

INSTRUCTIONS FOR USE 使用指南

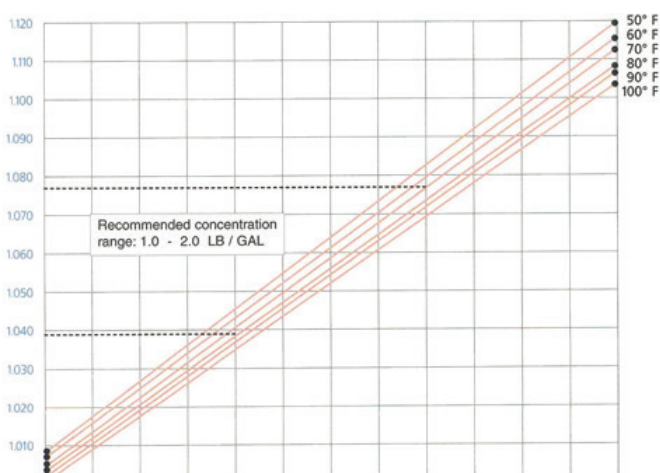
ZP-14A developer bath can be applied by immersion dip, spray or flow-on techniques, with immersion being the preferred method. If the immersion dip application is used, care must be taken to avoid transferring penetrant into the developer bath. Complete removal of surface penetrant will prolong the developer bath life. The developer bath temperature should not exceed 120°F / 48°C. If spray or flow-on techniques are used, care should be taken to avoid foaming as foam bubbles will create holes in the developer film. Use ZAF-2 antifoaming additive if necessary.

显像剂可以通过浸泡, 喷涂或者泼洒等方式使用, 其中推荐使用浸泡方式。如果使用浸泡方式需要注意避免渗透液进入到显像剂槽中。经常清理显像剂溶液表面的渗透液可以有效延长显像剂的使用寿命。显像剂溶液温度不要超过48°C。如果使用喷涂或者泼洒等方式, 使用过程中请注意避免泡沫产生, 泡沫会影响显像剂成膜, 造成显像剂空白, 导致漏检。如有必要请使用ZAF-2消泡剂。

Developer bath is applied after the surface penetrant has been removed. Complete coverage of the part is essential to quality inspection. The application time is only long enough to cover the part completely. Additional contact with the developer bath may result in reduced sensitivity due to removal of penetrant from shallow discontinuities by detergent action. For best results, forced warm air drying (140°F / 60°C) is recommended after developer application. Once the developer is dry, the part should be removed from the dryer to prevent degrading the penetrant's visibility.

显像剂溶液使用前请清洗零件表面的多余渗透液。使用中请确保零部件完全浸泡在显像剂中。浸泡时间只需要满足显像剂溶液完全覆盖零部件即可。过长时间浸泡会将浅裂纹中的渗透液洗掉从而降低检测灵敏度。要得到最佳使用效果, 使用显像剂后推荐使用暖风(60°C)烘干。当显像剂吹干成膜后需要将零部件移出烘干设备以减少渗透液热衰减对灵敏度的影响。

密度-浓度图表


Maintenance Recommendations 维护建议:

Developer bath concentration can be monitored using a hydrometer or by taking a known volume of the bath, evaporating off the water and then weighing the residue. When using a hydrometer, refer to the density concentration chart provided below.

显像剂料槽浓度需要使用液体比重计监测或者使用取一定量槽液, 蒸发掉水分并称重残余物的方法监测。如果使用液体比重计请查看以下比重和浓度图表。

PROPERTIES 属性

Density 密度	593 g/L
NPE-Free 不含烷基酚	Yes 不含

USE RECOMMENDATIONS 使用推荐

NDT Method 无损检测方法	Penetrant Testing 渗透检测
Form (s) 显像方式	b
Recommended Concentration Range 建议浓度范围	119-239 g/L
Temperature Range 温度范围	4 - 48°C

PACKAGING 包装形式

01-3381-20C	5 kg pail 5公斤桶
01-3381-30C	20 kg pail 20公斤桶

HEALTH AND SAFETY 健康和安全

Review all relevant health and safety information before using this product. For complete health and safety information, refer to the product Safety Data Sheet, which is available at www.magnaflux.cn.

产品使用前请阅读相关的健康和安全隐患信息。完整的健康和安全隐患信息参考 www.magnaflux.cn 上的SDS (安全数据表)。