



CREAS

**On-site repair of
Glass-lined equipment**
搪玻璃設備的現場修補

A C E M E N D E R

GLASS LINED SURFACE REPAIR SPECIALIST

Our Own Repair Technology of Glass-lined Surface 我們自有的搪玻璃表 面修補技術



Full range of
Glass lined
Products &
Service



ACEMENDER
Anti corrosion
Sealant



Tantalum / Zirconium
Metal pressure vessel
Glass process equipments

Made in China

- We have own team of design and experienced technicians in China and had serviced in Chinese market over 10 years for many well-known customers. 我們在中國自有的設計和有經驗技師隊伍，已經在中國市場服務超過10年，為許多知名客戶長期服務。



A Wu Xi App Tec Company

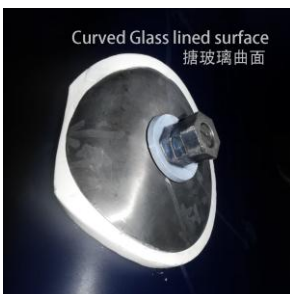


- Chemical repair coating are only used to repair corrosion defects, not for sealing, and do not come into contact with mediums. 化學修復塗層僅用於修復腐蝕缺陷，而非用於密封，並且不會與介質接觸。
- Purely physical repairs using metallic and non-metallic materials. 僅採用金屬和非金屬材料進行的純粹物理修復。
- Tantalum and zirconium materials are continuously supplied by well-known material suppliers and come with material quality guarantees. We have stock available, which shortens the waiting time for customers to have their repairs done. 鈹和鋯材料有知名材料供應商長期提供，有材料品質保證。我們備有庫存，縮短客戶等待修理時間。

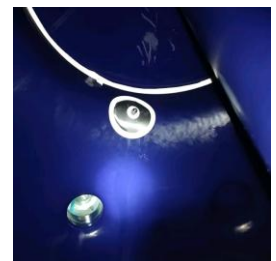


- We will check the unevenness of the sealing surface during on-site construction to ensure reliable sealing. 在现场施工过程中，我們要检查密封面的不平整度，以确保密封效果可靠。
- Our own AEG RS-50 modify PTFE gaskets had excellent performance on glass lined surface under high temperature up to 230 °C and corrosion resistance, It has been verified in previous repairs. 我們自有品牌的 AEG RS-50 型改性聚四氟乙烯墊圈在高達 230°C 的高溫環境下由於搪玻璃襯裡表面表現優異，具有出色的耐腐蝕性。這一點在之前的維修案例中已得到證實。
- We offer a warranty period based on the specific working conditions for our repairs. 我們的修補視具體工況提供保固期。

Tantalum Dish 鈮帽



Application in cases of damage 應用損壞場合	Small area on the curved surface 小面積曲面
Operating Temperature 設備使用溫度	-20 ~ 230 °C
Dimensions 尺寸	DN40 / 60 /100 mm
Sealing with glass lined surface 與搪玻璃表面密封	RF-50 Modify PTFE gaskets RF-50 改性鐵氟龍墊片
Dish Material 材料	Tantalum 1.2mm thick 鈮 1.2mm 厚
Filler on base material 基材修補填充劑	Resimac RM – 201 Should prepare on local 需要在當地準備
Assembly Method 安裝方法	Stud with double nuts 雙頭螺柱配兩個螺母



While the damage on inner glass lined vessel and the damaged diameter less than 80mm, could be use the metal dish to cover the damage site. Please check the max distance of the damage and the damage should not local on sealing surface.

對於內壁採用玻璃材質的容器以及直徑小於 80 毫米的受損部位，可以使用鈮帽來覆蓋受損區域。請檢查受損的最大範圍，且受損部位盤不應集中於密封表面。

PTFE sleeve 修補套



Application in cases of damage 應用損壞場合	Nozzle flange & neck 管嘴法蘭及頸部
Operating Temperature 設備使用溫度	-20 ~ 130 °C
Diameter of Nozzles 管嘴直徑	DN40 ~ DN600 , DN350*450
Sealing with glass lined surface 與搪玻璃表面密封	Lip seal or O ring on neck, 管嘴頸部唇密封或O圈
Sleeve Material 修補套材料	PTFE + 20% FRP (FDA) Type CREAS PF-20
Filler on base material 基材修補填充劑	Resimac RM – 201 Should prepare on local 需要在當地準備
Assembly Method 安裝方法	Use flange press into 用法蘭壓入

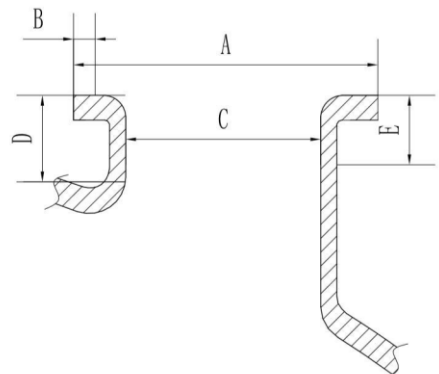
Attention 注意事項：

It is necessary to measure the nozzles as follow drawing first, to determine the non-roundness of nozzle so as to determine the sealing size, in order to ensure the sealing effect. Even if some nozzles are too non-round, the PTFE sleeve cannot be used for repair. 首先需要根据下圖来測量管嘴，以確定管嘴的不圓度，从而確定密封尺寸，以確保密封效果。如果有些管嘴的不圓度过大，PTFE 修補套不適合于修補。

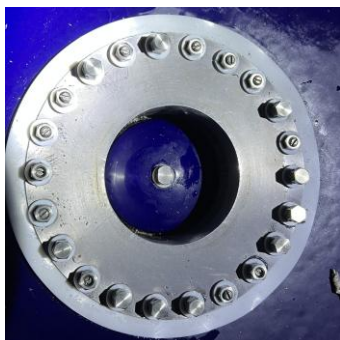


* Diameter C should measure in Multi direction to determine the non-roundness of nozzle.

直徑 C 應沿多個方向進行測量，以確定噴嘴的不規則度。



Metallic sleeve 金屬製修補套



Nozzle on Flat position
管口在平的位置



Nozzle on Curved position
管口在有弧度的位置

Operating Temperature 設備使用溫度	-20 ~ 230 °C
Sealing with glass lined surface 與搪玻璃表面密封	RF-50 Modify PTFE gaskets RF-50 改性鐵氟龍墊片 Sleeve flange Should With sealing line 修補套法蘭須有密封線
Sleeve Material 修補套材料	Tantalum or Zirconium 鈹或鈳
Filler on base material 基材修補填充劑	Resimac RM – 201 Should prepare on local 需要在當地準備
Assembly Method 安裝方法	press into & screws 壓入後螺栓鎖緊

Nozzle on Flat position 管口在平的位置

Application in cases of damage 應用損壞場合	Outlet nozzle inner ring 出料管嘴內圈
Sealing on nozzle neck 管嘴頸部密封	Expand PTFE tape 膨脹四氟帶
Diameter of Nozzles 管嘴直徑	DN100 / DN150 , DIN PN10 / ANSI 150lb

- Should measure the nozzle as upper required.
需按上面要求測量管嘴。

Nozzle on Curved position 管口在有弧度的位置

Application in cases of damage 應用損壞場合	Top nozzles inner ring 槽頂管嘴內圈
Sealing on nozzle neck 管嘴頸部密封	With PTFE sleeve outside 外部PTFE套配合使用
Diameter of Nozzles 管嘴直徑	DN50 ~ DN300 , DIN PN10 / ANSI 150lb

- Should measure the nozzle by Experienced technicians.
需有經驗技師測量管嘴。

Metallic plate 金屬製板修補



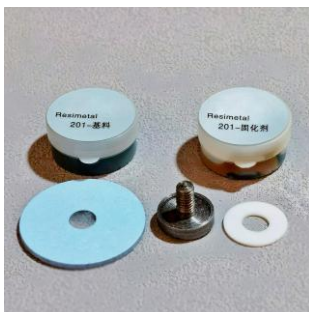
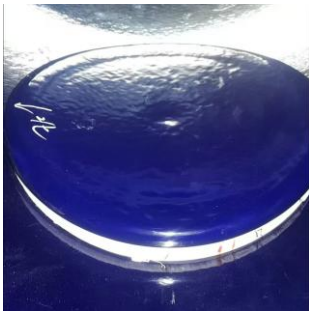
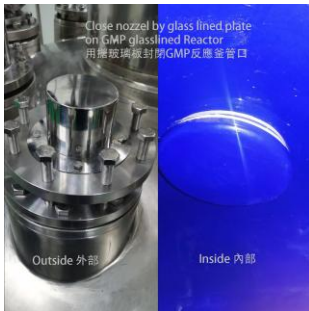
Application in cases of damage 應用損壞場合	Large area on the flat surface 大面積平面
Operating Temperature 設備使用溫度	-20 ~ 230 °C
Dimensions 尺寸	≥ Ø120 mm
Sealing with glass lined surface 與搪玻璃表面密封	RF-50 Modify PTFE gaskets RF-50 改性鐵氟龍墊片 Flange Should With sealing line 法蘭須有密封線
Dish Material 材料	Tantalum 1.2mm thick 鉭 1.2mm 厚
Filler on base material 基材修補填充劑	Resimac RM – 201 Should prepare on local 需要在當地準備
Assembly Method 安裝方法	Screws or stud with nuts 螺栓或雙頭螺柱配螺母



While the damage on inner glass lined vessel and single curved surface, metal plate to cover the damage site. Please check the max distance of the damage. Normally the is a big damage area.

對於內襯玻璃的容器以及單個彎曲表面的損壞情況，需用金屬板覆蓋受損部位。請檢查損壞的最大範圍。通常來說，受損區域會比較大。

Glass Lined plate 搪玻璃板修補



Application in cases of damage 應用損壞場合	Large area on the flat surface 大面積平面
Operating Temperature 設備使用溫度	-20 ~ 150 °C
Dimensions 尺寸	≥ Ø200 mm
Sealing with glass lined surface 與搪玻璃表面密封	RF-30 Expend PTFE gaskets RF-30 膨脹鐵氟龍墊片
Dish Material 材料	Glass Lined or Zirconium 搪玻璃或鈹
Operating Pressure 設備使用壓力	ATM
Assembly Method 安裝方法	Stud with nuts outside of vessel 釜外螺柱配螺母

Tantalum screw 鈹釘修補

Application in cases of damage 應用損壞場合	Small area 小面積
Operating Temperature 設備使用溫度	-20 ~ 230 °C
Dimensions 尺寸	≤ Ø20 mm
Sealing with glass lined surface 與搪玻璃表面密封	RF-50 Modify PTFE gaskets RF-50 改性鐵氟龍墊片
Dish Material 材料	Tantalum 鈹
Filler on base material 基材修補填充劑	Resimac RM – 201 Should prepare on local 需要在當地準備
Assembly Method 安裝方法	Screws 螺栓

Sheets Repair 薄片修補



Application in cases of damage 應用損壞場合	Multi direction curved larger surface 多維度大曲面
Operating Temperature 設備使用溫度	-20 ~ 180 °C
Dimensions 尺寸	≥ Ø200 mm
Sealing with glass lined surface 與搪玻璃表面密封	RF-50 Modify PTFE gaskets RF-50 改性鐵氟龍墊片
sheet Material 材料	RF-50 Modify PTFE or Tantalum RF-50 改性鐵氟龍或鉬
Operating Pressure 設備使用壓力	ATM
Assembly Method 安裝方法	Screws or stud with nuts 螺栓或雙頭螺柱配螺母

Customized Design 客製化設計

Based on the customer's usage and the on-site damage situation, a customized solution is formulated. As shown in the right picture, the outlet is repaired by using a PTFE sleeve or a steel sleeve coated with PFA, which is suspended and tightened outside the reactor. However, only a discharge ball valve can be installed.

根據客戶使用情況及現場破損情況客製化制定方案，如右圖，用PTFE套或鋼噴塗PFA的套在釜外反吊拉緊的出料口修補，不過只能裝出料球閥。



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