第一篇Part 1
免焊管路与电焊管路的对比及优势
welding kits and no welding kits Comparison and advantages

MengZhong breaker piping kits

免焊套件特写

Close-up of the no welding piping kit

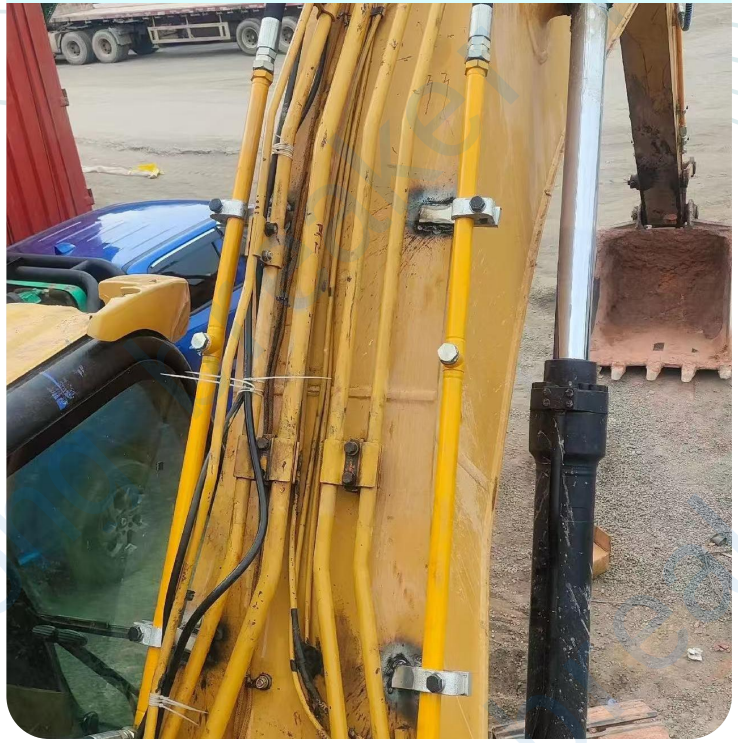


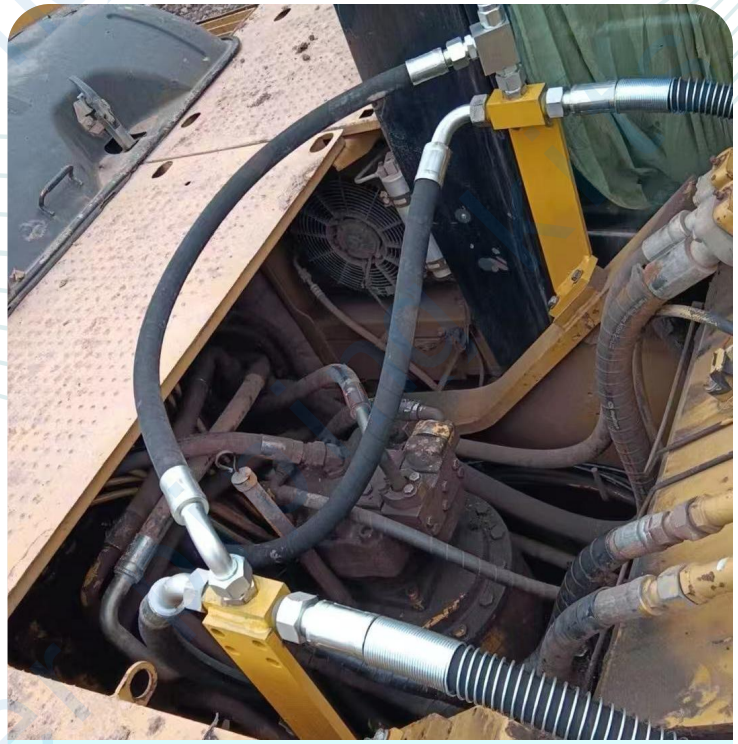
免焊安装： 无需焊接的模块化装配方案

No welding installation: A modular assembly solution that requires no welding.

电焊安装： 传统焊接固定方案

Welding installation: Traditional welding fixing solution





目的： 深入分析两种方案，帮助选择最合适的安装方式

Objective: To analyze the two options in depth and help choose the most suitable installation method.



免焊安装（No-Welding Installation）

- 定制化与高品质
Customization and High quality

核心定义：
Core definition:

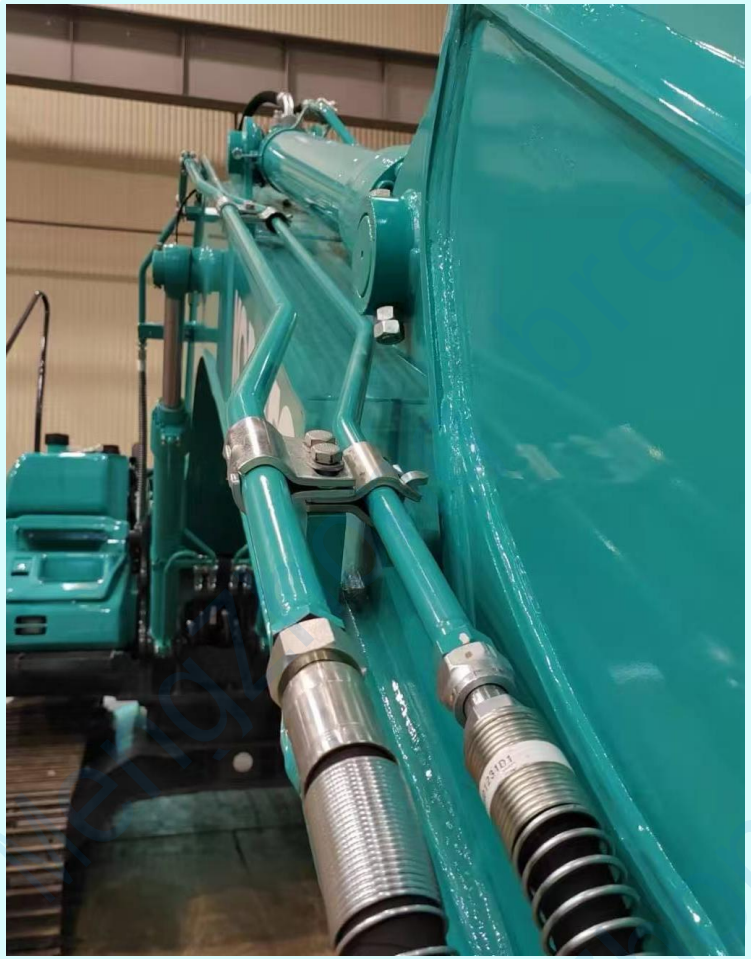
专属定制设计： 针对不同品牌、不同吨位、甚至不同年份的机型进行单独开发设计，实现“一机一型”Customized Design: We develop and design uniquely for different brands, tonnages, and even different years of production, achieving a "one machine, one design" approach.

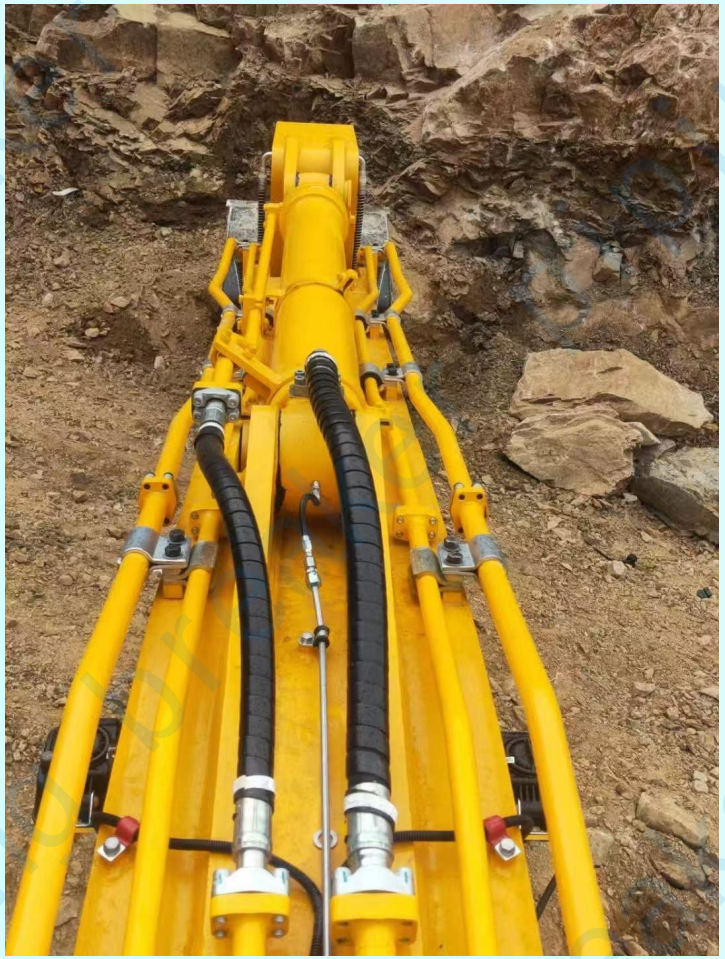
原装位无损安装： 完美利用原厂预留孔位和车身结构，安装后宛若原装
Original-position, non-destructive installation: Perfectly utilizes the original pre-drilled holes and vehicle body structure, resulting in an appearance identical to the original after installation.

完全避免在挖掘机大臂上进行任何焊接作业。Completely avoid any welding work on the excavator boom.

免焊安装---- 定制化与高品质

(No Welding Installation---Customization and high quality)







量身定制，完美匹配 — 免焊管路为每一款机型提供专属解决方案。Tailor-made, perfectly matched — solderless piping provides a customized solution for every model.

免焊安装的优势 **Advantages of no welding installation**



新增核心优势：

New core advantages:

量身定制，完美匹配

Tailor-made, perfect match

管路走向与原车高度契合，布局合理，避免与其它部件干涉，大幅降低管路磨损风险

The piping routing is highly compatible with the original vehicle, with a reasonable layout that avoids interference with other components and significantly reduces the risk of piping wear.

品质对标原厂

Quality comparable to the original manufacturer

采用高性能材料（如高强度定制管夹、优质液压软管），工艺精湛，耐久性和可靠性全面提升，服务中高端市场

Utilizing high-performance materials (such as high-strength custom pipe clamps and high-quality hydraulic hoses), and employing sophisticated craftsmanship, durability and reliability are comprehensively enhanced, serving the mid-to-high-end market.

电焊安装- 通用化与低成本 (Welded Installation--Generalization and low cost)

核心定义：
Core definition:

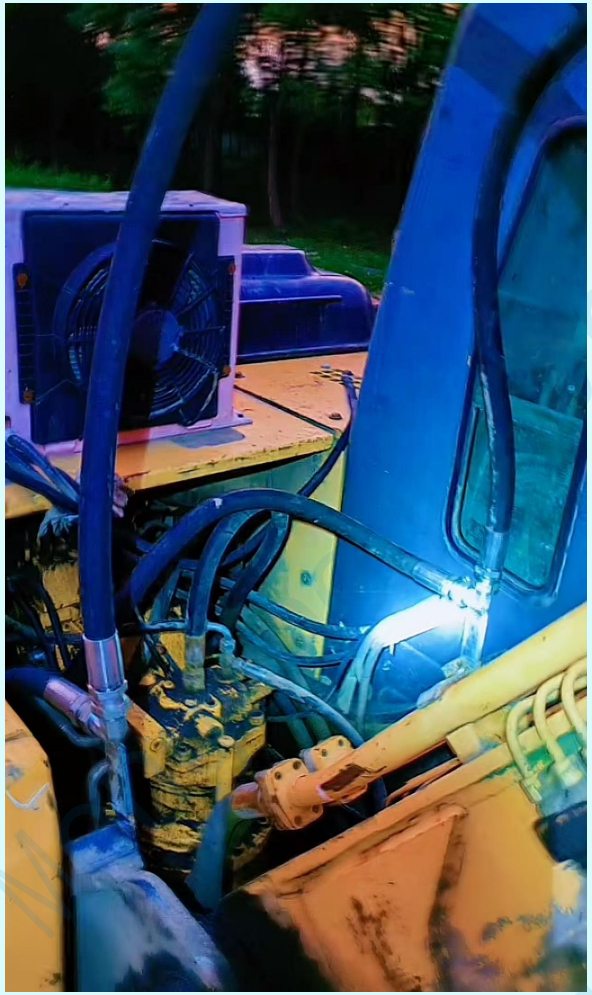
通用设计： 采用“一刀切”的设计理念，同吨位机型（如20吨级）使用同一套管夹和管路方案Universal Design: Adopting a "one-size-fits-all" design concept, the same set of pipe clamps and piping solutions are used for models of the same tonnage (such as the 20-ton class).

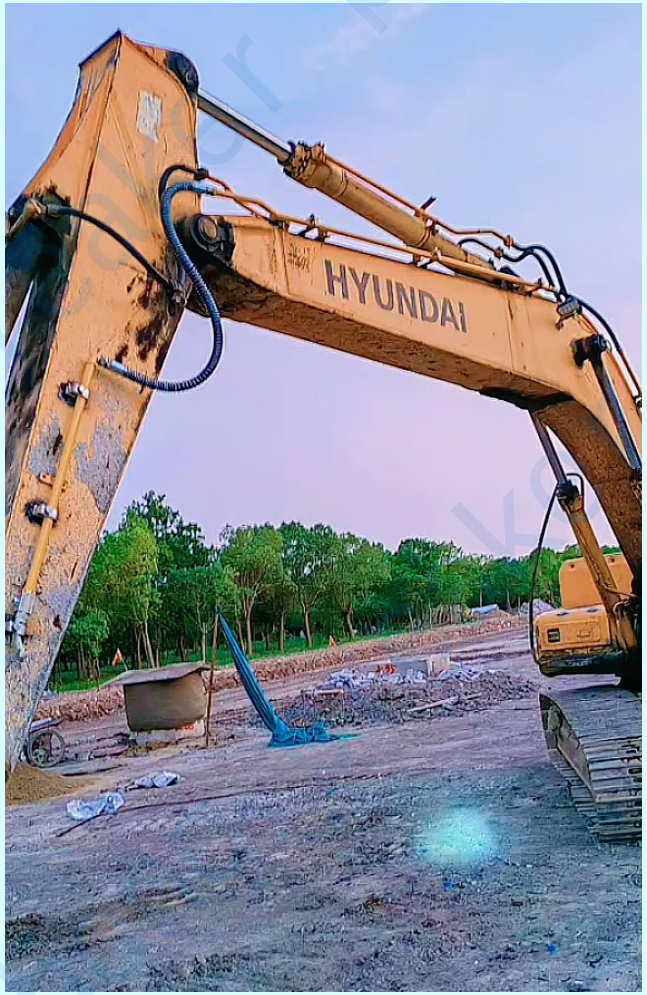
焊接固定： 依靠焊接来适应和弥补设计上的不匹配，强行将管夹固定于大臂
Welding Fixing: Relying on welding to adapt to and compensate for design mismatches, forcibly fixing the pipe clamps to the boom.

主要追求功能实现和成本控制，服务于价格敏感型市场
The primary focus is on functionality and cost control, serving price-sensitive markets.



电焊安装（Welding Installation）





The generic design, lacking originality, makes it difficult to adapt welding solutions to the unique structures of different machine models.



No welding design results in an aesthetically pleasing appearance, robust structure, and uniform color.

电焊安装的弊端

Disadvantages of welding installation

匹配度差，存在风险

Poor matching, risks exist.

通用设计无法完美适应所有机型，可能导致管路拉扯、弯折半径过小或与其它部件发生干涉，存在早期磨损和爆管隐患The universal design cannot perfectly adapt to all models, which may lead to pipe strain, excessively small bending radii, or interference with other components, resulting in premature wear and the risk of pipe bursts.

用料与工艺标准较低

Low standards in materials and processes

为控制成本，管夹材质（如普通钢）、软管等级和接头品牌可能采用标准较低的产品，长期耐久性存疑To control costs, lower-standard products may be used for pipe clamps (such as ordinary steel), hose grades, and fitting brands, raising questions about their long-term durability.

MengZhong breaker piping kits

结论与建议：

Conclusions and Recommendations:

免焊安装：品质与安全的飞跃

No welding installation: A leap forward in quality and safety

免焊安装 不仅是一种安装技术的升级，更是从“通用功能实现”到“定制品质体验”的理念飞跃。它代表着更高的安全性、更好的匹配度和更长的使用寿命，虽然初始投入较高，但能有效降低后续维护成本和风险，是注重设备长期价值用户的首选

No welding installation is not just an upgrade in installation technology, but a leap from "general-purpose functionality" to "customized quality experience." It represents higher safety, better compatibility, and longer service life. Although the initial investment is higher, it effectively reduces subsequent maintenance costs and risks, making it the preferred choice for users who value the long-term value of their equipment.

电焊安装的价值与风险

Value and Risks of Electric Welding Installation

电焊安装 作为传统方案，在特定市场和预算极其有限的情况下仍有其价值，但用户需清醒认知其在匹配度、材料品质和潜在风险上的妥协

Welding installation, as a traditional solution, still has its value in specific markets and with extremely limited budgets. However, users need to be aware of the compromises it involves in terms of compatibility, material quality, and potential risks.

第二篇 Part 2

氩弧焊 与 摩擦焊 工艺的对比

Comparison of **argon arc welding** and **friction welding** of Steel pipe processes

MengZhong breaker piping kits

外观
Appearance

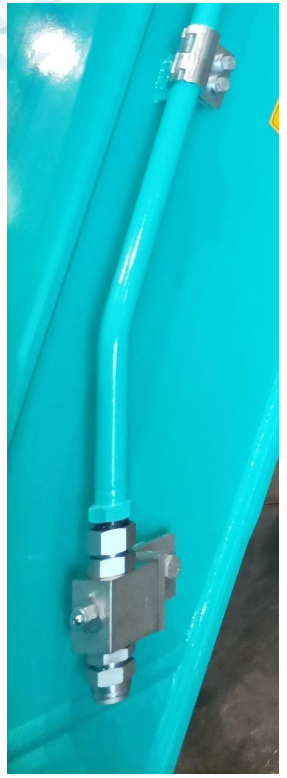


摩擦焊外观呈现圆环状，会有很多死角，导致表面喷涂难以渗透，后期使用容易氧化生锈。

Friction welding produces a ring-shaped appearance with many dead corners, making it difficult for surface coatings to penetrate and causing oxidation and rust during later use.

氩弧焊外观整体平整，表面喷涂后美观，油漆不易脱落，长时间使用也不会氧化生锈

Argon arc welding produces a smooth overall appearance, and the surface is aesthetically pleasing after spraying. The paint is not easy to peel off and will not oxidize or rust even after long-term use.



内壁
Inner wall



摩擦焊内壁也呈圆环状，导致钢管内通径变小，影响液压油流通性，直接降低了整体流量，由于圆环的阻力，造成液压油压力脉冲，对挖掘机和属具的液压系统影响较大

The inner wall of the friction welding is also annular, which reduces the inner diameter of the steel pipe, affecting the flow of hydraulic oil and directly reducing the overall flow rate. Due to the resistance of the annulus, hydraulic oil pressure pulses are caused, which have a significant impact on the hydraulic system of the excavator and its attachments.

氩弧焊内壁整体平整，液压油流通性高，作为液压管道最佳的焊接工艺

Argon arc welding produces a smooth inner wall and allows for high hydraulic oil flow, making it the optimal welding process for hydraulic pipelines.



氩弧焊工艺同尺寸钢管焊接后内径为：23.5mm

The inner diameter of a steel pipe of the same size after argon arc welding is 23.5mm.



摩擦焊工艺同尺寸钢管焊接后内径为：18mm

The inner diameter of a steel pipe of the same size after friction welding is 18mm.



第三篇Part 3

盟众免焊管路 和 普通免焊管路 对比

Meng Zhong no welding piping kits and ordinary no welding piping kits comparison

MengZhong breaker piping kits

我公司免焊和普通免焊的区别

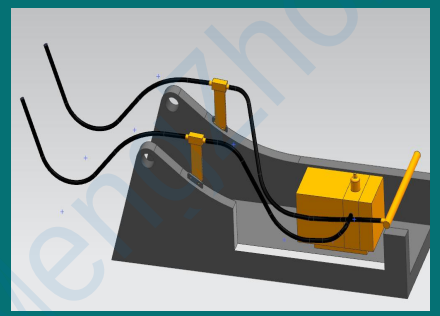
The difference between our company's no welding and regular no welding products.

	支架 stand	钢管 Steel pipe	烤漆 Baking paint	螺栓 screw bolt	设计 design	清洁度 Cleanliness
普通电焊 **Ordinary welding**	焊接支架 Welding stand	壁厚薄 未酸洗磷化 Thin steel pipe, not pickled or phosphated	颜色呆板 多机型共用 Dull color scheme; multiple models use the same color.	黑色 8.8级 Black, 8.8 level	无设计 通用 No design General	杂质多，清洁度无法保证 There are many impurities, and cleanliness cannot be guaranteed.
普通免焊 **Ordinary no welding**	免焊支架 材料薄 No welding stand; Thin material	普通钢材 未酸洗磷化 Ordinary steel, unpickled and unphosphated	颜色相对多一点，也不够全面 There are relatively more colors, but it's not comprehensive	黑色10.9级 Black, 10.9 level	简单设计 图纸数据准确度差 Simple design, poor accuracy of drawing data	无特殊工艺清洁度无法保证 Without Cleanliness guaranteed Didn't have special clean processes.
盟众免焊 **Mengzhong no welding**	免焊支架 材料加厚 No welding stand; Thickened material	Q345B材质 酸洗磷化处理 壁厚加厚 Q345B steel pipe material; pickling and phosphating treatment; thickened steel pipe.	一机一色 挖机工厂提供色板，颜色准确 One machine, one color. The excavator factory provides color swatches for accurate color matching.	达克罗表面处理（不生锈） 10.9级 Dacromet surface treatment (rust-free) Grade 10.9	工厂提供原装数据 准确、合理 Original data provided by the excavator factory; accurate and reasonable design.	经过高压海绵枪喷射清洗 清洁度能达到NS 9级 After high-pressure sponge gun cleaning, the cleanliness level reach NS 9.

我公司免焊和普通免焊的区别

The difference between our company's no welding and regular no welding products



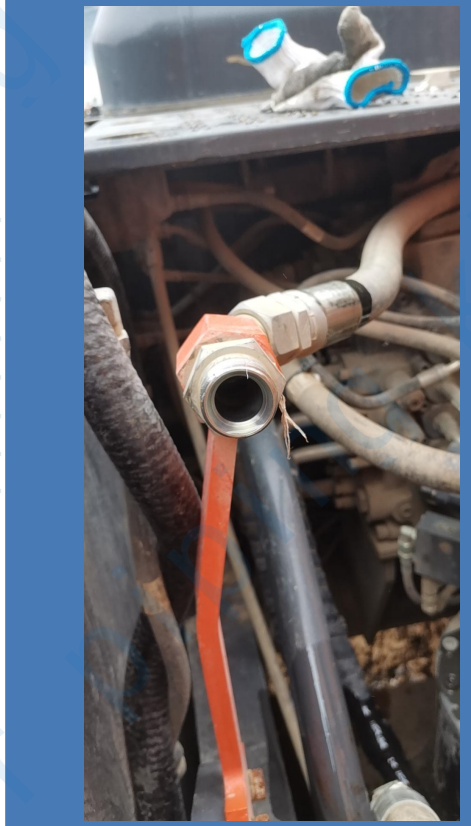




1、支架经过加厚加固处理，更耐用
2、接口全采用H型接头，带O型圈，密封效果更佳且不易松动漏油

1. The stand has been thickened and reinforced for greater durability.

2. All interfaces use H-type connectors with O-ring seals, providing a better seal and reducing the risk of loosening and oil leakage.



普通免焊支架偏薄，容易断裂，接口是老式C口，密封性欠佳

The ordinary solderless bracket is rather thin, and easily breaks. The interface is an older Type-C connector, which has poor sealing.

我公司钢管内壁清洗

Our company's steel pipe inner wall cleaning







所有钢管均采用高压海绵喷射工艺清洗内壁，做到无尘无油污，保证每一根钢管的内部清洁，行业内领先工艺！

All steel pipes undergo high-pressure sponge spray cleaning of their inner walls to ensure a dust-free and oil-free environment, guaranteeing the cleanliness of the inside of every steel pipe – we have leading technology in the industry!