



XZJ5163TYH (XLY103TB) Pavement
Maintenance Vehicle

Technical Specification

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XZJ5163TYH (XLY103TB) Pavement Maintenance Vehicle

Technical Specification

XZJ5163TYH (XLY103TB) 路面养护车

技术规格书

1. Overview

XZJ5163TYH(XLY103TB) pavement maintenance vehicle is applicable for the rapid repair of chuck holes on highway, national and provincial trunk roads, municipal roads and asphalt pavement, and can meet various construction process requirements such as rapid heating of cold finished product mixture, regenerative heating of milling old materials, field frying of asphalt mixture and in-place recycling of pavement. In addition, the vehicle is characterized by multiple function in one machine, easy operation and high reliability.

1 概述

XZJ5163TYH (XLY103TB) 路面养护车适用于高速公路、国省干线、市政道路沥青路面坑槽病害快速修补，能满足冷成品混合料快速加热、铣刨旧料再生加热、现场炒制沥青混合料、路面就地再生等多种施工工艺要求；具有一机多能、操作方便，可靠性高的特点。

2. Executive Laws, Rules, Safety Standards and Product Standards

In the process of product design, strictly abide by the “Standardization Law”, “Product Quality Law”, “Measurement Law”, “Standardized Review and Management Methods for New Mechanical and Electrical Product”, “Enterprise Standardization Management Method” and “Environmental Protection Law” and other laws and regulations.

This product executes and complies with the following relative standards:

JT/T 501 Asphalt pavement maintenance truck/machine

JB/T 9727 Road Construction and Maintenance Machinery Equipment - Syndrome Maintenance Truck

GB16735 Road vehicle — Vehicle identification number (VIN)

GB 7258 Safe Specification for Motor Vehicles Operating on Roads

GB4785 Prescription for installation of the external lighting and light signaling devices for motor vehicles and their trailers

GB11567 Motor vehicles and trailers-lateral and rear underrun protection requirements

GB15084 Motor vehicles — Rear view mirrors — Requirements of performance and installation

GB1589 Limits of dimensions, axle load and masses for road vehicles

GB23254 Retro-reflective markings for trucks and trailers

GB15741 The license plates (crackets) and its position on motor vehicles and trailer

GB25990 Rear-marking plates for vehicles and their trailers

2 产品执行的法律、法规、安全标准和产品标准

在产品的设计过程中，严格遵守《标准化法》、《产品质量法》、《计量法》、《机电新产品标准化审查管理办法》、《企业标准化管理办法》和《环境保护法》等法律法规。

本产品执行并符合以下相关标准：

JT/T 501 《沥青路面养护车/机》

JB/T 9727 《道路施工与养护设备沥青路面养护车》

GB16735 《道路车辆车辆识别代号（VIN）》

GB 7258 《机动车运行安全技术条件》

GB4785 《汽车及挂车外部照明和信号装置的安装规定》

GB11567 《汽车及挂车侧面和后下部防护要求》

GB15084 《机动车辆后视镜的性能和安装要求》

GB1589 《道路汽车外轮廓尺寸、轴荷及质量限值》

GB23254 《货车及挂车车身反光标识》

GB15741 《汽车和挂车号牌板（架）及其位置》

GB25990 《车辆尾部标志板》

3. Main performance and characteristics

- ◆ Weichai up-mounted engine(45kw), chassis engine startup is not required during operation and has good usage economy;
- ◆ It is equipped with hydraulic feeding, asphalt mixture heating, asphalt spraying, discharging, waste storage and other functions. Optional cutting machine, hydraulic crushing picks for rapid cutting and crushing of diseases in base layer and optional walk-behind single drum roller for compaction of road surface.
- ◆ Heating system for variable power hot-air circulation drum bunker, which is characterized by quick heating and energy conservation and environmental protection.
- ◆ Optimized drum spiral discharging system, which is characterized by quick discharging speed and no residue.

- ◆ Three partition hot air type pavement heating wall achieves uniform heating without aging; hydraulic raking equipment can quickly scarify and harrow the heated pavement with low labor intensity, good loosen effect;
- ◆ Heat-conducting oil heating asphalt system, which can automatically measure asphalt capacity and achieve precise control;
- ◆ Electrical heating emulsified asphalt spraying system, which adopts automatic telescoping spray tube and has the functions of diesel and pneumatic cleaning;
- ◆ Hydraulic roller lift bracket is placed behind the cab and easy to operate;
- ◆ Hydraulic power (14Mpa) output to connect with attachments swiftly;
- ◆ 4kW power output(220V/380V) interface to connect lighting and electric auxiliary tools.
- ◆ The computer RIMS platform based on GPS remotely monitors the important construction information and positioning of the whole vehicle.
- ◆ The mobile APP can monitor the important construction data, positioning and driving trajectory of the vehicle in real time.
- ◆ High and low voltage instrument box, which can display working parameter in real time and is safe and convenient;

3 主要性能与特点

- ◆ 潍柴上装发动机（45kW），工作时不需启动底盘发动机，使用经济性好
- ◆ 具备液压上料、沥青混合料加热、沥青喷洒、出料、废料储存等多种功能，可选配切割机、液压破碎镐对基层病害快速切割、破碎，并可选配手扶单钢轮压路机压实路面
- ◆ 变功率热风循环滚筒料仓加热系统，加热速度快，节能环保
- ◆ 优化的滚筒螺旋出料系统，出料速度快，无残留
- ◆ 三分区热风式路面加热墙，加热均匀无老化；液压耙松装置可快速耙松已加热路面，效率高，劳动强度低，耙松效果好
- ◆ 导热油加热沥青系统，沥青输送量自动计量，控制精确
- ◆ 电加热乳化沥青喷洒系统，采用自动伸缩喷洒管，具备柴油及气压清洗功能
- ◆ 液压升降压路机托架，置于驾驶室后方，操作安全方便
- ◆ 液压动力（14MPa）输出，可快速连接液压镐等辅具
- ◆ 4kW 电力输出（220V/380V）接口，可外接照明及电动辅具
- ◆ RIMS 平台基于 GPS 远程监控整车重要施工信息及定位
- ◆ 用户登陆手机 APP 可实时监控整车重要施工数据、定位和行驶轨迹
- ◆ 高低压分区仪表箱，显示器实时显示工作参数，安全方便

4. Main technical parameters and parts and components

4.1 Technical parameters table

Item		Unit	Parameter
Product model		-	XZJ5163TYH (XLY103TB)
Working performance parameter			
Drum bunker	Effective capacity	m ³	1
	Screed heating mode	/	Heated air circulation
	Single heating time of mixing silo	min	15~ 20
	Feeding speed of rotary silo	kg/min	380
	Feeding mode	/	Hydraulic automation
	Upper hopper capacity	m ³	0.13
Heating wall (Optional)	Effective heating area of heating wall	m ²	2.5
	Heating depth	cm	6
	Partitions quantity	/	3
Hot asphalt system	Tank body capacity	L	480
	Screed heating mode	-	Diesel burner
Emulsified asphalt system	Tank body capacity	L	40
	Screed heating mode	-	Electrical heating (3kw)
	Diesel cleaning box volume	L	15
Volume of the waste box		m ³	0.48
Chassis performance parameter			
Type	-	FAW Jiefang CA1160P62K1L2A1E5Z	
Engine type	-	CA4DK1-22E51	
Engine power/speed	kW/r/min	165/2300	
Driving type	-	4×2	
Emission standard	-	China Stage V	
Maximum traveling speed	km/h	101	
Up-mounted engine parameter			
Type	-	Weichai WP3.2G61E316	
Power	kW/r/min	45/2400	
Overall dimension parameter			
Minimum ground clearance	mm	240	
Approach Angle/Departure Angle	°	17.3/12.6, 11.8	
Overall dimension except heating wall(length×width× height)	mm	8175×2495×3440	
Overall dimension incl. heating wall(length×width× height)	mm	9640×2495×3440	
Mass parameters of whole machine			

Curb weight	kg	13750/15120 (with heating wall)
Total mass	kg	16000
Auxiliary tools (optional) : roller, hydraulic pick, cutting machine, blower, plate hammer and shocking rammer		

4.2 List of main parts and components

No.	System name	Parts name	Brand
1	Chassis system	Chassis	FAW Jiefang
2	Hydraulic system	Hydraulic pump	Fuxin Beixinxing Co., Ltd.
3		Hydraulic motor	Eaton
4		Solenoid valve group	Beijing Huade Hydraulic
5	Hot air heating system	Hot blast heater of direct combustion	XCMG
6	Dust removal system	Controller	Wika
7	Power system	Up-mounted engine	Weichai
8		Engine	Wuxi Faraday

4.3 Optional parts and components

No.	Parts name	Brand	Purpose
1	Hydraulic picks	Atlas copco	Pavement crushing
2	Road roller	XCMG	Pavement compaction
3	Road roller	Wacker Neuson	Pavement compaction
4	Plate rammer	Wacker Neuson	Pavement compaction
5	Battering ram	Wacker Neuson	Pavement compaction
6	Cutting machine	Wacker Neuson	Pavement cutting
7	Purger	Stihl	Pavement purging
8	Heating wall system	XCMG	Heating and raking of asphalt pavement

4 主要技术参数及配套件

4.1 技术参数表

项目	单位	参数	
产品型号	-	XZJ5163TYH(XLY103TB)	
作业性能参数			
滚筒料仓	有效容积	m ³	1
	加热方式	/	热风循环
	旋转料仓单次加热时间	min	15~20
	旋转料仓出料速度	kg/ min	380
	上料方式	/	液压自动
	上料斗容量	m ³	0.13
路面加热墙 (选配)	有效加热面积	m ²	2.5
	加热深度	cm	6
	分区数量	/	3
热沥青系统	箱体容积	L	480
	加热方式	-	柴油燃烧器
乳化沥青系统	箱体容积	L	40
	加热方式	-	电加热 (3kW)
	柴油清洗箱容积	L	15
废料箱容积	m ³	0.48	
底盘性能参数			
型号	-	一汽解放 CA1160P62K1L2A1E5Z	
发动机型号	-	CA4DK1-22E51	
发动机功率/转速	kW/r/min	165/2300	
驱动型式	-	4×2	
排放标准	-	国 V	
最高行驶速度	km/h	101	
上装发动机参数			
型号	-	潍柴 WP3. 2G61E316	
功率	kW/r/min	45/2400	
整机尺寸参数			
最小离地间隙	mm	240	
接近角/离去角	°	17.3/12.6, 11.8	
不含加热墙外形尺寸(长×宽×高)	mm	8175×2495×3440	
含加热墙外形尺寸(长×宽×高)	mm	9640×2495×3440	
整机质量参数			
整备质量	kg	13750/15120(带加热墙)	
总质量	kg	16000	

辅助工具（选配）：压路机、液压镐、切割机、吹风机、冲击夯、平板夯

4.2 主要配套件明细

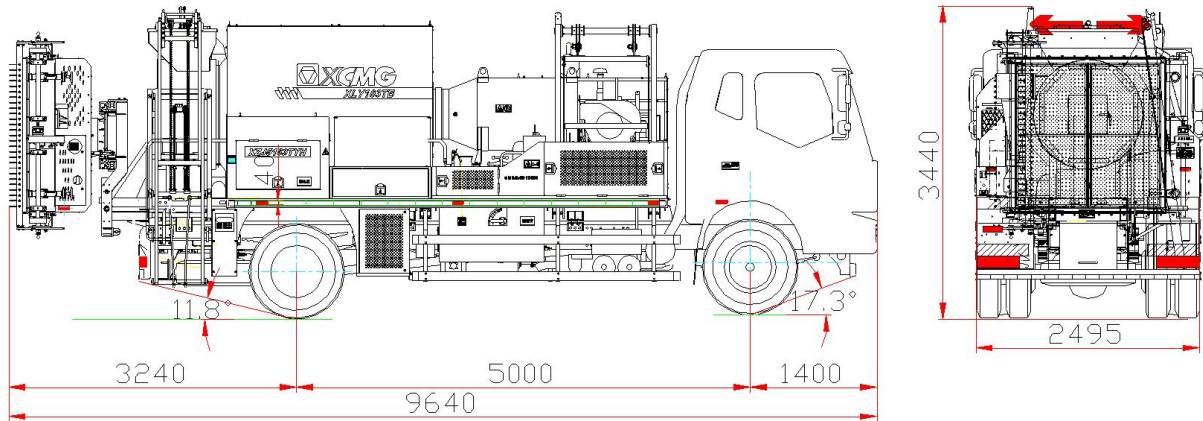
序号	系统名称	部件名称	品牌
1	底盘系统	底盘	一汽解放
2	液压系统	液压泵	阜新北鑫星
3		液压马达	美国伊顿 Eaton
4		电磁阀组	北京华德
5	热风加热系统	直燃式热风炉	徐工 XCMG
6	控制系统	控制器	威卡
7	动力系统	上装发动机	潍柴
8		发电机	无锡法拉第

4.3 可选配套件

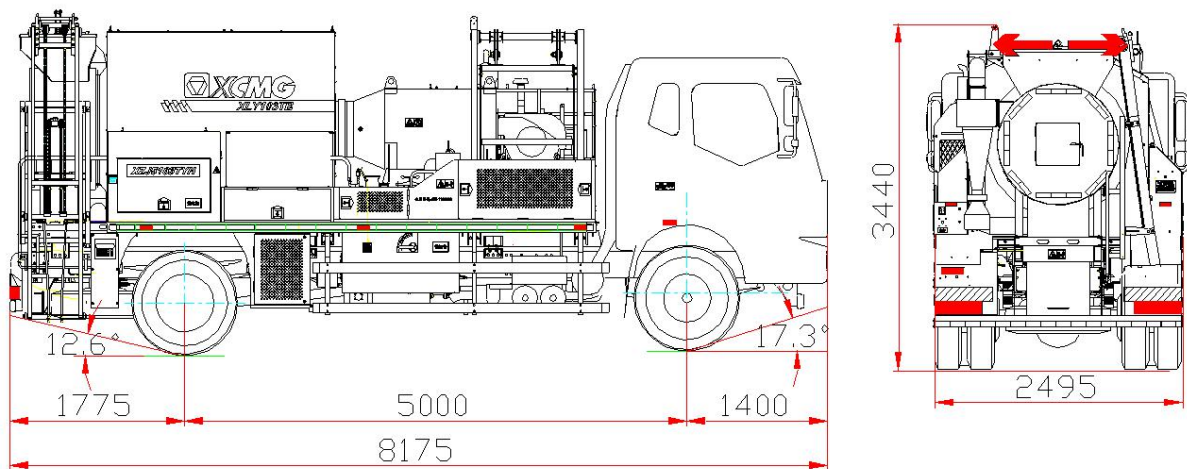
序号	零部件名称	品牌	用途
1	液压镐	瑞典阿特拉斯 Atlas copco	路面破碎
2	压路机	徐工 XCMG	路面压实
3	压路机	德国威克诺森 Wacker neuson	路面压实
4	平板夯	德国威克诺森 Wacker neuson	路面压实
5	冲击夯	德国威克诺森 Wacker neuson	路面压实
6	切割机	德国威克诺森 Wacker neuson	路面切割
7	吹扫机	德国斯蒂尔 Stihl	路面吹扫
8	路面加热墙系统	徐工 XCMG	沥青路面加热耙松

4.4 Shape and dimension(mm)

4.4 外形及外形尺寸 (mm)



Overall dimension with heating wall
带加热墙外形及外形尺寸



Overall dimension without heating wall
无加热墙外形及外形尺寸

5. Features of main structure(system)

XZJ5163TYH (XLY103TB) pavement maintenance vehicle is mainly composed of chassis system, hot air circulation heating system, mixing tank system, hot asphalt system, emulsified asphalt system, auxiliary power system, hydraulic pneumatic system, control system, heating wall system, auxiliary tools, etc.

5 主要结构（系统）特点

XZJ5163TYH (XLY103TB) 路面养护车主要由底盘系统、热风循环加热系统、旋转料仓系统、热沥青系统、乳化沥青系统、辅助动力系统、液压气动系统、控制系统、加热墙系统、辅助工具等组成。

5.1 Chassis system

- ◆ FAW Jiefang 4x2 China-V emission 16t chassis (CA1160P62K1L2A1E5Z) is selected, engine model CA4DK1-22E51, power is 165kw /2300 /r/min, powerful, safe, reliable and comfortable.
- ◆ Equipped with air conditioning, single berth, ABS anti-lock system.

- ◆ The maximum driving speed is 101km/h, with fast transition speed and high working efficiency
- ◆ Vehicle traveling data recorder is equipped to record the information in traveling process in real time

5.1 底盘系统

- ◆ 选用一汽解放 4×2 国 V 排放 16t 底盘 (CA1160P62K1L2A1E5Z), 发动机型号 CA4DK1-22E51, 功率为 165kW /2300 /r/min, 动力强劲, 安全可靠, 操作舒适
- ◆ 配置冷暖空调, 单卧铺, ABS 防抱死系统
- ◆ 最高行驶速度 101km/h, 转场速度快, 工作效率高
- ◆ 配置行驶记录仪, 实时记录行驶过程信息

5.2 Hot air circulation heating system

- ◆ Imported Italian RIELLO RL-70 converter power burner, heating power is 219-714 kW, fuel consumption of 20.5 kg/h
- ◆ Variable power hot air circulation heating system saves fuel consumption and operation cost.
- ◆ Cyclone furnace structure enables full combustion and high efficiency.

5.2 热风循环加热系统

- ◆ 选用进口意大利利雅路 RL-70 变功率燃烧器, 加热功率 219—714kW, 油耗 20.5kg/h
- ◆ 变功率热风循环加热系统, 节约燃料, 使用成本低
- ◆ 旋风式炉膛结构, 燃烧充分, 效率高

5.3 Mixing tank system

- ◆ Drum effective heating capacity is 1 m³.
- ◆ When the environment temperature is at 20 °C, 1m³ of asphalt mixture can be heated to 140 ~ 170 °C within 20 minutes
- ◆ 1m³ of asphalt mixture in the tank is turned in reverse for 5 minutes, and discharged fully without residue.
- ◆ Unique cyclone dust removal design, good dust removal effect.
- ◆ Hydraulic automatic feeding mechanism garanteesthe feeding speed;

5.3 滚筒料仓系统

- ◆ 滚筒有效加热容积 1m³
- ◆ 环境温度 20℃时, 滚筒料仓内 1m³沥青料 20min 加热至 140~170℃
- ◆ 滚筒内 1m³混合料反转 5min 内完成出料, 卸料干净无残留

- ◆ 独特的旋风除尘设计，除尘效果好
- ◆ 液压自动上料，上料速度快

5.4 Hot Asphalt System

- ◆ Emulsified asphalt tank volume is 480l
- ◆ Accurate measurement of hot asphalt spraying volume
- ◆ Heating system of thermal oil, evenly heating without dead angle
- ◆ Hot asphalt spraying pipe has electric heating function.
- ◆ Hot asphalt spraying has the function of reverse asphalt pump cleaning pipeline.

5.4 热沥青系统

- ◆ 沥青罐容积 480L
- ◆ 热沥青喷洒量准确计量
- ◆ 导热油加热系统，沥青加热均匀无死角
- ◆ 热沥青喷洒管具有电加热功能
- ◆ 热沥青喷洒具有反转沥青泵清洗管道功能

5.5 Emulsified asphalt system

- ◆ Emulsified asphalt tank volume is 40L; the diesel cleaning tank is 15L
- ◆ Pneumatic conveying emulsified asphalt, spraying evenly.
- ◆ The cleaning function of the pipeline with diesel oil and compressed air.
- ◆ Electrical heating function of emulsified asphalt tank(heating power 3kw)

5.5 乳化沥青系统

- ◆ 乳化沥青罐容积 40L，柴油清洗箱 15L
- ◆ 气压输送乳化沥青，喷洒均匀
- ◆ 具有柴油及压缩空气进行管路的清洗功能
- ◆ 乳化沥青罐具有电加热功能（加热功率 3kW）

5.6 Auxiliary power system

- ◆ Weichai WP3.2G61E316 up-mounted engine with power of 45kW/2400 r/min; no need to switch on chassis engine, energy efficient.
- ◆ Equipped with Faraday generator, power 12kW/3000 r/min, can provide power output of 220V and 380V, the output power is 4kW, easy for auxiliary tools construction.

5.6 辅助动力系统

- ◆ 配置潍柴 WP3.2G61E316 上装发动机，功率 45kW/2400r/min，工作时不需启动底盘发动机，节约能耗

- ◆ 配置法拉第发电机，功率 12kW/3000 r/min，可提供 220V 和 380V 两种电力输出，输出功率 4kW，方便辅助工具施工

5.7 Pneumatic system

- ◆ The hydraulic and pneumatic elements all adopt international famous brands with reliable quality and stable performance

- ◆ 14Mpa hydraulic power output can quickly connect with auxiliary tools such as hydraulic pick.

5.7 液压气动系统

- ◆ 液压气动元件采用国际知名品牌，质量可靠，性能稳定

- ◆ 14MPa 液压动力输出，可快速连接液压镐等辅具

5.8 Control System

- ◆ Intelligent wireless measurement material temperature: wireless signal transmission, intelligent display screen real-time display control temperature, automatic control of material temperature.

- ◆ The computer RIMS platform based on GPS remotely monitors the important construction information and positioning of the whole vehicle.

- ◆ The mobile APP can monitor the important construction data, positioning and driving trajectory of the vehicle in real time.

- ◆ High and low voltage partition instrument box and low voltage 24V operation panel, which have high-voltage leakage protection and high safety performance;

- ◆ Drum heating and heating wall heating automatic temperature control system, the program automatically control the burner combustion power, automatic protection to prevent high temperature damage burner

- ◆ Roller hydraulic lifting, warning light flashing prompt, safe and reliable

- ◆ Accurate measurement of hot asphalt spraying volume

5.8 控制系统

- ◆ 智能无线测量料温装置：无线电信号传输、智能显示屏实时显示料温并可实现料温自动控制

- ◆ RIMS 平台基于 GPS 远程监控整车重要施工信息及定位

- ◆ 用户登陆手机 APP 可实时监控整车重要施工数据、定位和行驶轨迹

- ◆ 配备有高低压分区仪表箱，实现低压 24V 操作施工面板，高压漏电保护，安全性能高

- ◆ 滚筒加热和加热墙加热自动温度控制系统，程序自动控制燃烧器燃烧功率，自动保护防止燃烧器高温损坏
- ◆ 压路机液压升降，警示灯闪烁提示，安全可靠
- ◆ 热沥青喷洒量准确计量控制

5.9 Heating wall system (optional)

- ◆ Three partition hot air type pavement heating wall, whose heating area is 2.5 m²; heating depth within 20min can reach 6cm, the bottom temperature can reach 140 °C , high construction efficiency;
- ◆ Variable power automatic control burner heating can effectively prevent pavement scorch and asphalt aging; in addition, asphalt pavement heating gradient is small and heating is uniform;
- ◆ Hydraulic raking equipment can quickly scarify and harrow the heated pavement with low labor intensity, good loosen effect;

5.9 加热墙系统（选配）

- ◆ 三分区热风式路面加热墙，加热面积为 2.5 m²；20min 内加热深度达 6cm，底层温度可达 140℃，施工效率高
- ◆ 采用变功率自动控制燃烧器加热，有效防止路面烤焦、沥青老化，沥青路面加热梯度小，加热均匀性好
- ◆ 液压耙松装置可快速耙松已加热路面，效率高，劳动强度低，耙松效果好

5.10 Auxiliary tools system

- ◆ Optional XCMG XMR05 or Wacker Neuson RSS800A single mini road roller; excitation force greater than or equal to 15kN; The roller is hydraulically lifted and placed on the frame behind the cab, which is convenient and safe
- ◆ Cutting depth equal to or greater than 105mm, Wacker Neuson MFS735 or MFS1350 cutting machine as option.
- ◆ Hydraulic pick with pressure 140bar, optional Swedish Atlas LH190E hydraulic pick.
- ◆ Purging 59 m/s or higher, STIHL BG85 hand-held blower or BR450 STIHL back-pack fan can be selected;
- ◆ Auxiliary tools such as ripper and shovel blade can be provided as standard.

5.10 辅助工具系统

- ◆ 可选徐工 XMR05 单钢轮小型压路机或德国威克诺森 RSS800A 单钢轮小型压路机；压路机激振力≥15kN，压路机液压升降，置于驾驶室后方车架上，操作方便，整车行驶

安全

- ◆ 切割机切割深度 $\geq 105\text{mm}$ ，可选德国威克诺森 MFS735 或 MFS1350 路面切割机
- ◆ 液压镐压力 140bar，可选瑞典阿特拉斯 LH190E 液压破碎镐
- ◆ 吹扫器 $\geq 59\text{m/s}$ ，可选斯蒂尔 BG85 手持式吹扫器或 BR450 斯蒂尔背负式风机
- ◆ 随车标配耙松器、铲子等辅具

6. Transport safety requirements

Users or organizations shall ensure when transferring:

- ◆ Check whether fastener of main components such as heating wall, auxiliary frame, roller frame and emulsified asphalt box are loosened, if so, fasten them;
- ◆ Mount the locking chain of heating wall to prevent heating wall from overturning or sliding;
- ◆ Take feeding funnel from feeding frame down and place inside the tool kit, and then mount safety chain;
- ◆ Turn off the main valve of working devices at chassis air pocket
- ◆ Hook the fixed pin roll of roller up to prevent road roller from moving or overturning;
- ◆ It is prohibited to stand on the frame during transportation;
- ◆ Fix auxiliary tools, for example tension the tensioners of cutter, plate hammer and shocking rammer, and place hydraulic pick and blower on the special mounting bracket.
- ◆ Minimize driving at height speed and emergency braking.
- ◆ Do not use burner for heating and rotary roller during transportation

6 运输安全要求

用户或使用单位在车辆转场时应确保：

- ◆ 检查主要部件如加热墙、副车架、压路机架、乳化沥青箱的紧固件是否松动，如松动须紧固
- ◆ 加热墙的固定链应挂上，防止加热墙翻转或转移等
- ◆ 将上料斗从上料架上取下放至工具箱内部，并挂上安全挂链
- ◆ 将底盘气包处的工作装置总阀门关闭
- ◆ 将压路机的固定销轴插上，防止压路机移动或翻转等
- ◆ 运输过程中车架上严禁站人
- ◆ 辅助工具要固定好，如切割机、平板夯、冲击夯要使用紧绳器拉紧，液压镐、吹扫机放置在工具箱内或专有固定架上
- ◆ 尽量减少高速行驶和紧急刹车

◆ 禁止行驶过程中使用滚筒燃烧器进行加热及旋转滚筒

7. Construction Case

7 产品施工案例

- Construction case 1

Date: 2018	Location: GuizhouDuyun	Project Name
Repair area: 100 m ² / day		Pit slot repair



● Construction case 2

Date: 2018	Location: Shandong	Linyi,	Project Name
Heating depth: 6cm		In-situ hot regeneration	
			

8. Disclaimers

The Company follows the principles of sustainable development, and reserves the right to continuously improve our products without prior notice. We will perform continuous improvement of relevant contents without notice.

8 声明

本公司遵循可持续发展的原则，因此，我们保留在不预先通知的情况下，对产品进行持续改进的权力。相关内容的持续改进，恕不另行通知。