

十八世纪工业革命活化石

A Living Fossil of the 18th Century Industrial Revolution

嘉阳小火车

©张祥著 ©陈勇译 Jiayang Narrow-Gauge Steam Train

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摄影指南

A Tourist Guide for
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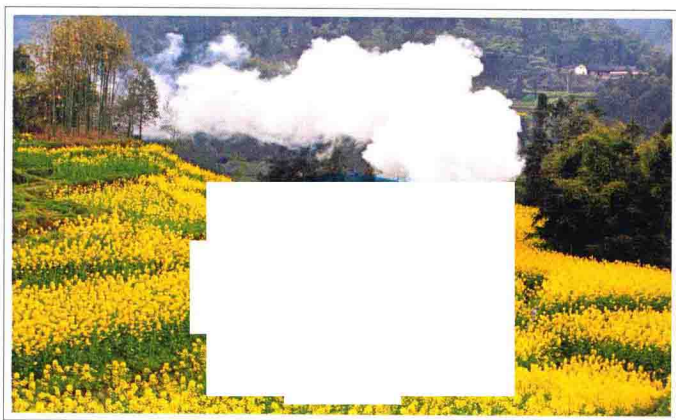


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CHINA RAILWAY PUBLISHING HOUSE

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张 祥 著
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序

沫水

人类迄今，科技日新。运输工具嬗变，水陆空各呈精彩。铁路“老大”，向来称雄，自18世纪蒸汽机车领率，工业革命浪潮席卷全球。然蒸汽机车随时代潮流已为过眼云烟、历史遗痕。

极目世界，难觅蒸汽机车营运踪迹。却于中国西南一隅，崇山峻岭之间，蠕动一列小火车，呼吐白烟，啸驰原野，拔坡登峰，堪为奇迹。

乐山天下第一大佛，嘉阳世界绝版火车。小火车权属嘉阳集团，其冠首四川省乐山市煤矿业。嘉阳不为其名而嘉而阳，却为“小火车”而声名大噪，美丽乐山亦因此陡增“城市名片”，新辟旅游洞天。英、俄、日、德、澳诸多外国客人，为嘉阳小火车一声汽笛召唤，纷至沓来，国内游客亦与日俱增。

嘉阳小火车始建于1958年，窄轨短厢，规矩折半，但蒸汽机车各类机具设备，肝胆俱全。时为煤矿运煤输料，接送矿工，搭载沿线居民，轰轰烈烈，倍受宠爱。矿区乡梓，为嘉阳小火车幸甚，皆大欢喜。逶迤深山，平添绿色长龙，少却寂寞；汽笛轰鸣，群山呼应，回气荡肠。山外世界虽五光十色，然嘉阳小火车世外桃源，自得其乐。

今世界蒸汽机车，多为室陈馆列，乏于生动鲜活。运营蒸汽机车工业遗产，嘉阳小火车实为“绝版”。感怀嘉阳小火车，怀旧大于观赏，尤其领略工业革命壮举，重温辉煌历程，沉思科技兴衰。故海外人士驻足嘉阳小火车，流连忘返；英俄人士唇枪舌战，各争蒸汽机车发明之冠。18世纪工业革命的“活化石”，嘉阳小火车当此殊荣。随感之余，亦睹物思进，蒸汽机车发明之又淘汰之，经济更当猛进，国人应倍努力。然毕竟嘉阳小火车现实存在，意义别具，既为工业遗产珍稀，又为旅游新支，当为嘉阳，当为乐山，乃至四川，齐为其呵护成长。

张祥——嘉阳小火车痴迷人士，人称“张火痴”。多年来，攀岩涉水，深入矿区，四季始终如一不辞辛劳，捕获精彩瞬间。我看后感慨不已，浮想翩跹，欣然提笔为张祥先生这册《嘉阳小火车》摄影作品集作“序”。这些图片，较全面系统地勾勒了嘉阳小火车概貌，以文写实，述其百年沧桑。视角独到，风格迥异，归真返朴，情趣雅然。从嘉阳小火车轮廓，可追溯历史年轮迹痕；于皑皑蒸汽，可沉湎迷茫已泄思；在游客欢歌笑语中，可体会沧桑历史的厚重与现实的淳朴；于层峦叠嶂，可在活力与寂静的交织中感悟生命。嘉阳小火车因其“工业活化石”之名独誉全球，《嘉阳小火车》摄影作品集亦创生动、鲜明、系统写照的“活化石”之先，实为嘉举，意味隽永。

藉《嘉阳小火车》摄影作品集，诚愿“活化石”永远鲜活，留住记忆，感悟人生。

Preface

By Mo Shui

We have so far witnessed the rapid development of science and technology as the transport means evolves, each making its way splendidly over the sea, the land, and in the air. The railway, which is known as the foremost leader in transport, has always dominated the arena. Initiated by the steam locomotive in the 18th century, the Industrial Revolution swept the whole world. Steam locomotives, however, along with the trend of the times, have become bygones as historical vestiges.

Nowadays throughout the world, it is difficult to find steam locomotives in transport services as far as the eye can see, but here in a remote corner of southwestern China, a little steam train wriggles its way in the high mountains spewing columns of white smoke whilst past the wilderness, climbing the slope and ascending the peak. What a miracle it is!

Leshan boasts the No. 1 Giant Buddha under heaven whilst Jiayang owns the world's last-running steam train. The little steam train, actually a train pulled by steam locomotive on narrow-gauge track, belongs to Jiayang Group under the Leshan Coal Mining Industry in Sichuan. Jiayang is known not for its good and shiny looks but for its narrow-gauge steam train, which is taken as an emblem to show off the picturesque Leshan region as it is preserved to continue its regular runs to attract tourists. Visitors from England, America, Russia, Australia, Germany, and Japan, etc. have come in succession at the call of its whistle whilst domestic visitors flock in large numbers.

Building of the narrow-gauge railway began in 1958 on a decision to lay a 760mm gauge track for locomotives and rolling stock, which were diminutive and roughly half of the standard gauge. Though small, the train has all components and gears in position. It served to carry freight, the miners, the residents and villagers along the line. Smoky and noisy as it may be, it enjoys great favor among the local residents. Though deep in the mining area, the people are beatified to have this little train as it meanders through the remote mountains like a long green dragon. Its whistle is echoed far and wide in the mountainous area as it rumbles by, exhausting fumes all the way, reverberating amidst the high mountains. Though the outside world is bright in multiple colors, the little steam train works earnestly in Jiayang - a haven of peace, quite content with itself!

Steam locomotives in the world today are mostly preserved on static display in museums. Jiayang narrow-gauge steam train, as industrial heritage, may be the last steam train still in service. With a deep passion we recall the stories of the little steam train in nostalgic remembrance more than merely watching it, savouring the magnificent feast of the Industrial Revolution; by reviewing its rise and fall, we ponder on the vicissitudes of science and technology. That is why when coming to Jiayang many people from overseas are so fascinated with the little steam train that they almost forget to leave. There have been heated arguments between the British and the Russians over the invention of steam locomotive and its discontinuation. At such thoughts, we should make our efforts all the more in economic advancement. The little steam train in Jiayang as a reality in existence holds special significance to us as it is rare and precious both as industrial heritage and tourist attraction. All of our folks should do their bit to preserve it well and retain its continued service for Jiayang, for Leshan, and for Sichuan.

Zhang Xiang, an enthusiast of the Jiayang narrow-gauge steam train, is known as Zhang the Aficionado. Over the years he climbed rocks and crossed rivers and brooks through the mining area to capture splendid moments and sights, sparing no efforts incessantly in four seasons of the year. Looking at his pictures, I'm filled with emotion, thereby my recollections fly. Therefore I take it a pleasure to ink down my preface for this album by him, in which his photographic works outline a general picture of the Jiayang Narrow-Gauge Steam Train in a systematic and comprehensive manner as the vicissitudes of the little steam train over the decades are revealed.

His angle of view is original and his style is different from one to another, just in their original, plain condition, appearing in elegance. From the configuration of the Jiayang narrow-gauge steam train, one may be able to trace the rut mark of the historical age; in the snow-white steam, one may succumb to a confusion and release his thinking; in the tourists' joy and laughter, one may realize the splendid history and simplicity of the reality; amidst the peaks, one may become more aware of life in the interweaving of vigor and quietness. The Jiayang narrow-gauge steam train is reputed in the world as a living industrial fossil, and the photographs of the Jiayang Narrow-Gauge Steam Train bring a vivid, clear-cut and systematic portrayal of the living fossil above all. This move is really a good deed and marks long-lasting significance!

With the publication of the photographic works on the Jiayang Narrow-Gauge Steam Train, I sincerely hope the living fossil will remain fresh and bright and will stay in our memory forever, thus maintaining our reflections on life.

工业革命活化石 嘉阳小火车

1938年，四川省最早的中英合资煤矿落户犍为县芭蕉沟。诞生于1958年的嘉阳小火车至今仍然是当地人进出芭蕉沟的唯一交通工具。

嘉阳小火车现有能运行的蒸汽机车6辆，是石家庄动力机械厂上世纪五六十年代的仿制机车，型号为ZM16-4（窄轨、燃煤、重量16吨、4担轮对），牵引力3168公斤，锅炉工作压力13公斤，最大时速35公里，现载客时速控制为20公里。

小火车运行的芭石铁路地处犍为县芭沟镇、石溪镇境内，距犍为县城12公里。铁路全长19.84公里，轨距762毫米（约为准轨1435毫米的一半）；隧洞6个，弧线108段，最小转弯半径70米，最大坡度36.14%，爬升高差238米。

芭石铁路依山环绕而建，地势险峻，层峦叠嶂，山清水秀，风光旖旎；景区峡谷遍布恐龙时代幸存下来的桫欏树；铁路沿线村落点缀，传统农耕，民风纯朴；芭蕉沟苏式、英式和川西南小青瓦建筑包容并存；抗战工业遗址，矿井特色体验，清代水星古寨，同兴桫欏湖，马庙碉楼，竹海翠湖，渔舟唱晚……构成了一道道独特亮丽的自然文化风景线。

Jiayang Narrow-Gauge Steam Train A Living Fossil of the Industrial Revolution

In 1938, a coal mine was opened in the small town of Bajiaogou (Plantain Valley) in Qianwei county in southwestern China's Sichuan province, where the earliest Sino-British joint venture in Sichuan was founded. In 1958, a railway was built between Bajiaogou and Shixi for the operation of narrow-gauge trains. Since then it has been serving as the only means of transport for the local people to go in and out of the valley till today.

Today on the track, six steam locomotives still remain in working condition. Typed as ZM16-4, they were built by the Shijiazhuang Motive Power Machinery Works between the 1950s and 1960s as coal-burning locomotives with 0-8-0 wheel arrangement on narrow-gauge track, weighing 16 tons, delivering 3,168kg tractive effort, generating 1.3MPa working pressure from the boiler and running at a maximum speed of 35km/h with a control speed of 20km/h when pulling passenger carriages.

The narrow-gauge (762mm) railway line on which the little steam train runs is between Bajiaogou town and Shixi town in Qianwei county, which is 12km from the county seat of Qianwei. In a total length of 19.84km, there are 6 tunnels and 108 curves with minimum radius of 70m, maximum gradient at 36.14% and a difference of 238m in elevation along the line.

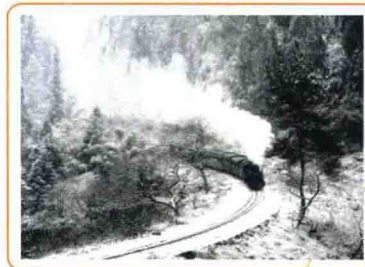
The Bajiaogou-Shixi railway was built according to the mountain encirclement, where topography is precipitous, landscape is featured with peaks one after another, rivers are clear and mountains are green, which make up a picturesque scenery. In the scenic area, down in the gorge there are spinulose tree ferns dating back to the Jurassic period. Along the tracks villages are scattered, where farmers still keep to traditional farming and the social practice is simple. In the town of Bajiaogou there are Soviet-style houses, British-style houses, and green tile-roofed houses typical of southwestern characteristics coexisting with each other. The industrial ruins of the period of the War of Resistance Against Japanese Aggression (1937~1945), a tour down into the mine pit, the ancient Shuixing village of the Qing Dynasty, the Suoluo Lake at Tongxing, the watchtower in Mamiao, the sea of bamboo, the placid lake, and the homebound fishermen singing on their boats at dusk, all of which make up a distinctive natural, cultural landscape.

嘉阳国家矿山公园旅游环线图

Circular Tourist Route
Jiayang National Park



犍为文庙



黄村井

芭蕉沟工业古镇

蜜蜂岩

嘉阳小火车·芭石铁路(20km)

芭马古道观光车(7km)

马庙

同兴砂梨湖

马庙至大马游船(10km)

大马

观音桥水库

大马至清溪公路(7km)

漂流(5km)

蜀南茉莉香都

清溪

乐宜高速

213国道

犍石公路(12km)

塘马公路(16km)

塘坝

犍为北(高速出口)

犍为



芭马古道



同兴砂梨湖



茉莉香都



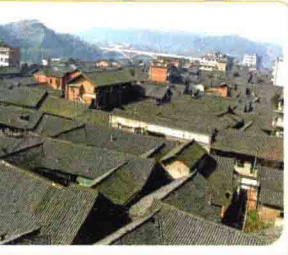
清溪古镇



罗城古镇

至罗城古镇

站



嘉阳小火车车厢、专列运行方式攻略：

普通车厢：

1. 长 4.5 米、宽 2 米，有背窗而坐的座位 18 个。车窗为铁质，有吊杆。
2. 长 8 米、宽 2 米，没有座位，人货混装，设有关牲畜的护栏隔离区。

观光车厢：

1. 长 8 米、宽 2.1 米，有玻璃车窗，和准轨火车类似座位。
2. 长 8 米、宽 2.1 米，有玻璃车窗，和准轨火车类似座位，有空调和视频播放系统。

普通客运班车：使用普通车厢，每天发车时间 7:00、13:00、16:30（国家法定节假日和周末 13:00 班车取消）。游客票价每站 5 元，不售票票，较拥挤，舒适性差，不在景点观光。不推荐一般游客乘坐。

观光专列：使用观光车厢，每天发车时间 10:30、13:00、15:00，国家法定节假日滚动发班。观光专列会在沿途蜜蜂岩、亮水沱、黄村井等景点观光。单程票价 80 元，当次车往返 160 元。

Practicalities

Ordinary carriage:

1.4.5-meter long and 2-meter wide; 18 seats arranged by the steel window; hanger bar available.

2.8-meter long and 2-meter wide; no seats available; both for passengers and freight, with fenced-off area for livestock.

Sightseeing carriage:

1.8-meter long and 2.1-meter wide, with glass windows and seats like those on the standard gauge train.

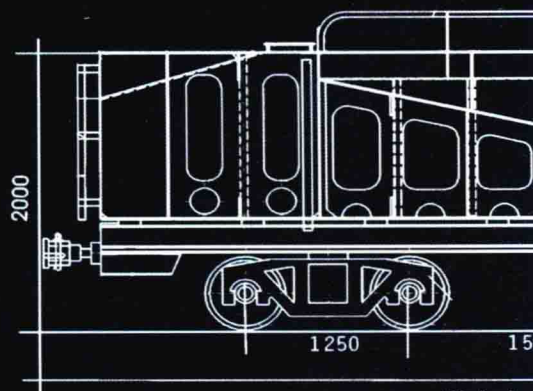
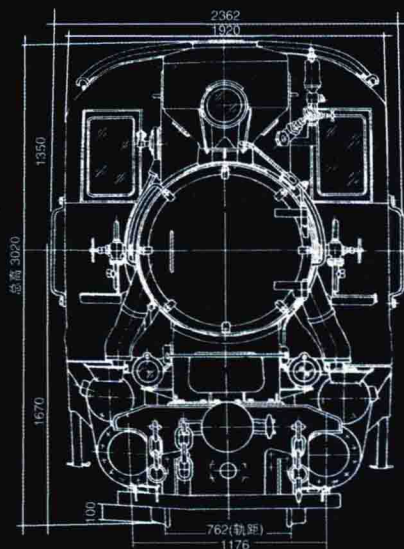
2.8-meter long and 2.1-meter wide, with glass windows and seats like those on the standard gauge train, equipped with air conditioner and video player.

Ordinary passenger train: ordinary carriages are used, with departures at 7:00, 13:00 and 16:30 daily, but the 13:00 departure is suspended on national holidays and weekends. Tourist ticket is available at 5 yuan per stop. It is, however, not recommended as it is normally crowded and not comfortable, and does not stop at sightseeing spots.

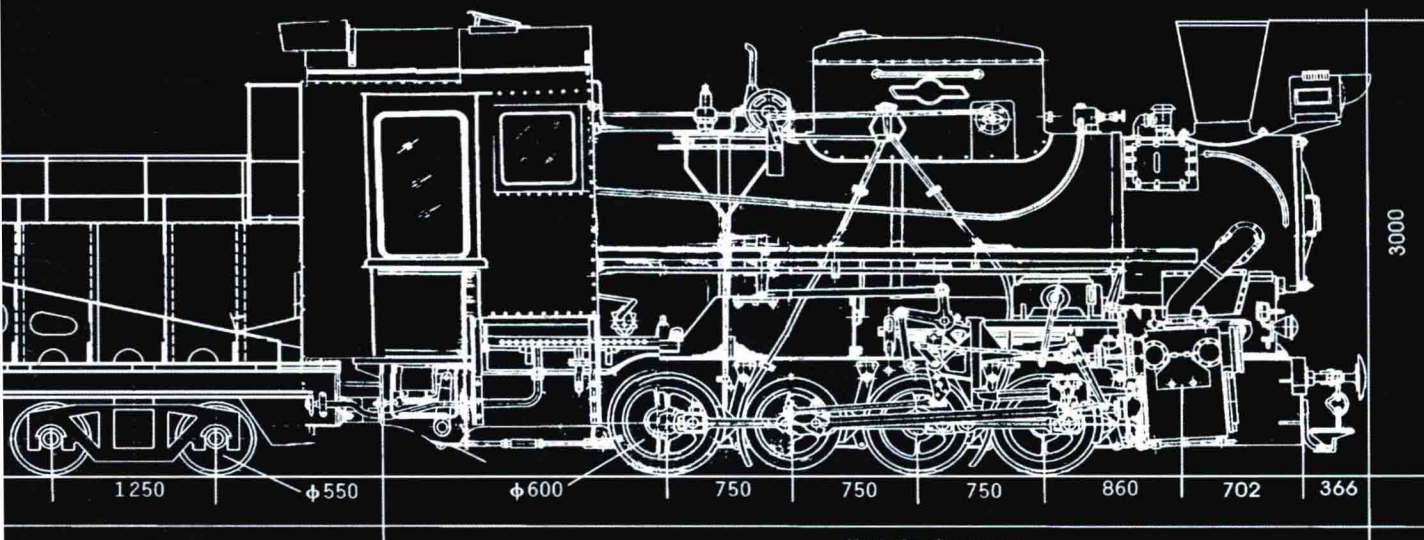
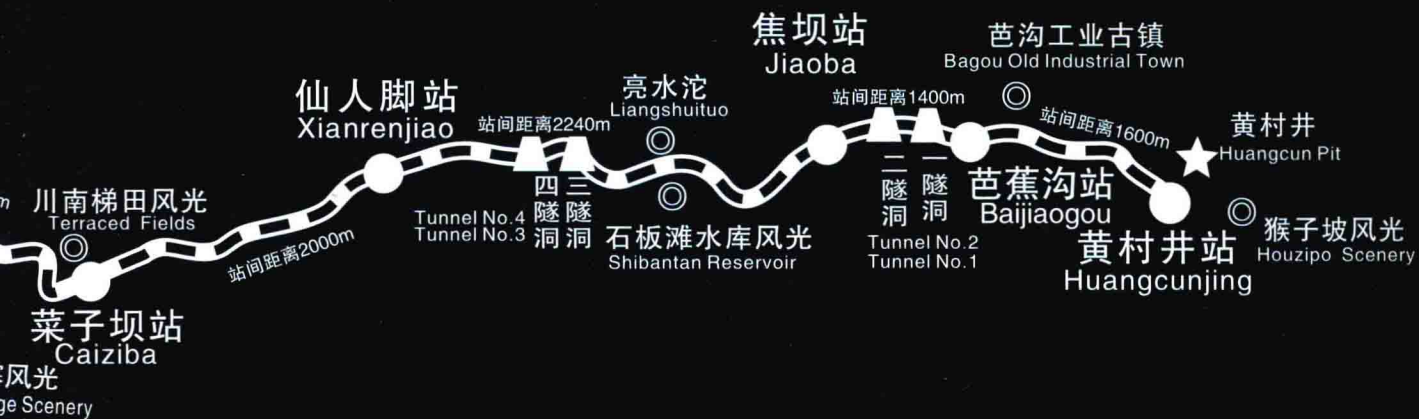
Special sightseeing train: sightseeing carriages are used, with departures at 10:30, 13:00 and 15:00 daily. On national holidays, departures are dispatched on a rolling basis. The special sightseeing train will stop at scenic spots such as Mifengyan, Liangshuituo, and Huangcunjing. One-way ticket at 80 yuan and return ticket at 160 yuan.



站点海拔：石溪站364m，跃进桥站378m，蜜蜂岩站484m，菜子坝站567m，仙人脚站602m，焦坝井站585m，芭沟站572m，黄村井站565m。
 隧洞长度：一隧洞224m，二隧洞224m，三隧洞127m，四隧洞104m，五隧洞49m，六隧洞175m。



煤水车
Tender



蒸汽机车 6000

Steam loco 6000





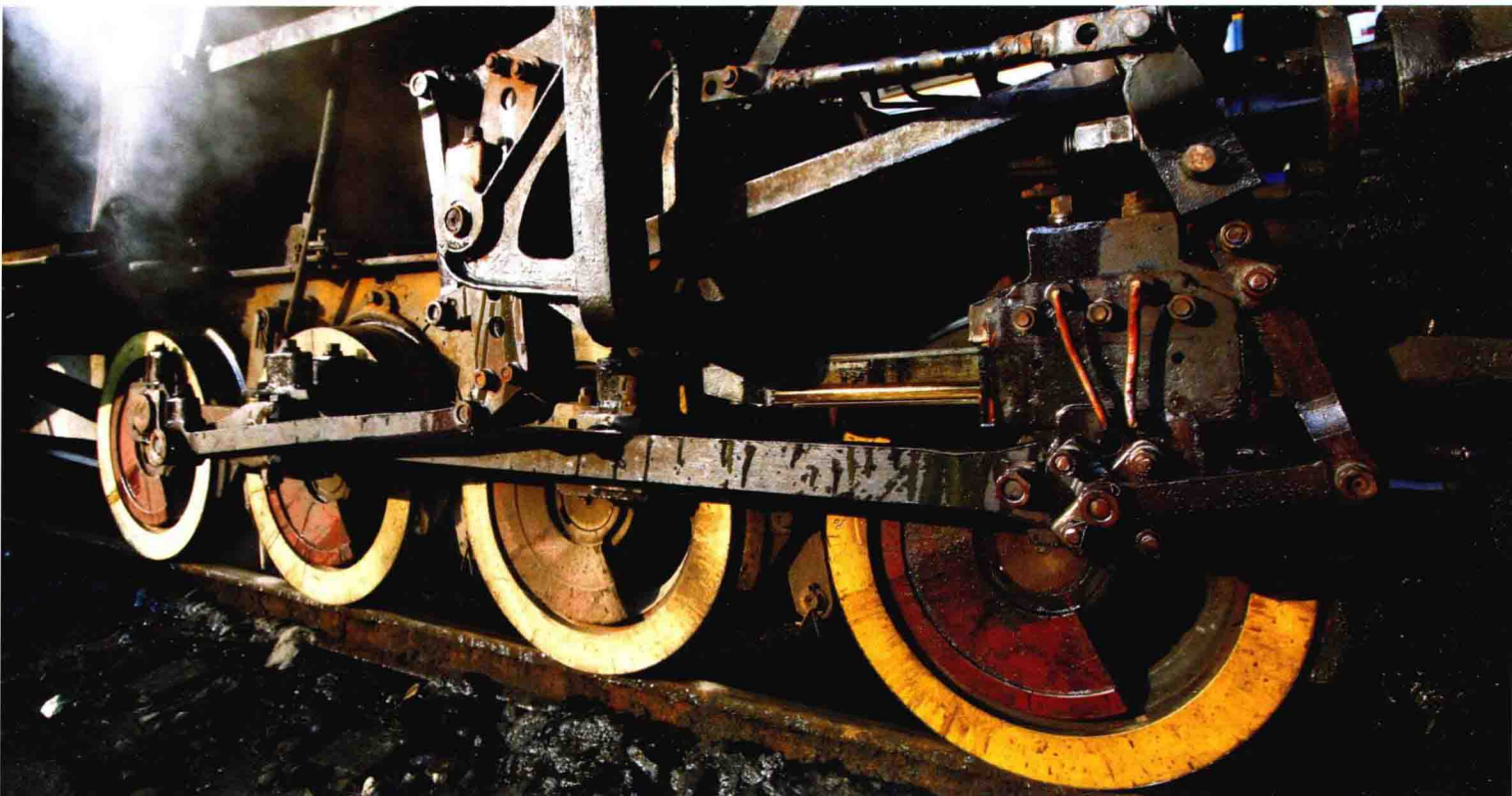
蒸汽时代 全手动

百载风烟起，飞龙舞紫云。
梦中花落处，鸣笛带幽芬。

嘉阳小火车保留了蒸汽时代最原始的操作方式，人工加煤、手动驾驶、信号旗和口哨指挥、人工扳道岔、人工接钩、人工刹车制动、手摇电话联络等，成为工业遗产不可或缺的内容。

The Steam Era - Manual Operation Only

The Jiayang narrow-gauge steam train retains the most primitive way of operation of the steam era: coal is manually charged by fireman; engine is manually piloted and directed by hand-waved signal flag and mouth-blown whistle; track is switched manually; carriages are coupled up and braked manually, and communication is made by hand telephones, etc. These features constitute the indispensable components of the industrial heritage.



人工加煤 Coal charged manually



人工刹车 Train braked up by hand



手摇电话 Hand-spun



全手动操作

Jiayang Narrow-Gauge
Steam Train

张祥摄影作品

Zhang Xiang's Photographic Works

