

Steam Preservation on the Oigawa Railway

Akira Shirai

The Oigawa Railway is a small private railway based in central Honshu that attracts some 200,000 visitors each year to its five working steam locomotives and many vintage passenger coaches. It also operates the *Trust Train* (See pp.28–29 in this issue of *JRTR*) belonging to the Japan National Trust.

Introduction

The Oigawa Railway is Japan's first heritage railway but it was first opened in 1927 to haul timber and carry materials for dam construction in central Shizuoka Prefecture. The single-track 3'6" gauge

line starts at Kanaya Town on the Tokaido main line and runs 65 km inland to Ikawa, following the course of the Oi River. The line was originally steam worked but was fully electrified in 1949. It has 75 tunnels and a 100-m high bridge and terminates 670 m above sea level at Ikawa Station. The last 25 km of the line running through the mountainous region is known as the Ikawa Line and has a short Abt rack-and-pinion section. The Ikawa Line section was completed in 1954. The entire 65-km route between Kanaya and Ikawa carries 1 million commuters and sightseers using regular electric and diesel railcars, but the first 40 km from Kanaya also carries 200,000 annual visitors on its famous steam-hauled preserved vintage trains.



Class C56 running along Oi River through plantation of green tea

(Author)

Start of Steam Working

In 1970, a local railway near the Oigawa Railway was planning to scrap an old British Dübs Class 2100 0-6-2 tank engine built in 1892. Many local people and employees of the Oigawa Railway, including myself, regretted the demise of this old workhorse so we decided to buy and preserve it in working order.

After this initial preservation, in 1976, we added a Class C56 2-6-0 tender engine from Thailand to our collection and started irregular steam operations on the first 39.5 km of the Oigawa Line.

Steam Operation Today

Today, we have five steam locomotives that all work the main line and four others that are not used for services (Table 1). The five different locomotives operate in all seasons making up to three round trips each day hauling three to seven coaches. The one-way trip takes 80 minutes and all seats are reserved. There is also a coach with Japanese-style *tatami* mats and an



Oigawa Railway's collection of steam locomotives

(Author)

Table 1 Oigawa Railway's Steam Locomotive Collection

Type	Class	Year built	Builders	Former owners	Wheel arrangement
C108	C10	1930	Kawasaki Sharyo, Ltd.	Government railways	2-6-4 tank
C11227	C11	1942	Nippon Sharyo, Ltd.	Government railways	2-6-4 tank
C11312	C11	1946	Nippon Sharyo, Ltd.	Government railways	2-6-4 tank
C12164	C12	1937	Nippon Sharyo, Ltd.	Government railways	2-6-2 tank
C5644	C56	1935	Mitsubishi Heavy Industries, Ltd.	Government railways to Thai National Railway	2-6-0 tender
1275	1275	1912	Koppel	Government railways to Nippon Stainless Co., Ltd.	0-6-0 tank
1	-	1911	Koppel	Ichihata Railway to Sumitomo Cement Co., Ltd.	0-6-0 tank
49616	9600	1910	Kawasaki Shipbuilding, Ltd.	Government railways	2-8-0 tender
2109	2100	1891	Dübs	Government railways to Seno Railway	0-6-2 tank

observation car. Sometimes, the trains are double- or triple-headed.

These tourist trains help promote sightseeing in a region that is famous for its Japanese tea plantations.

Crews, Traditions and Maintenance

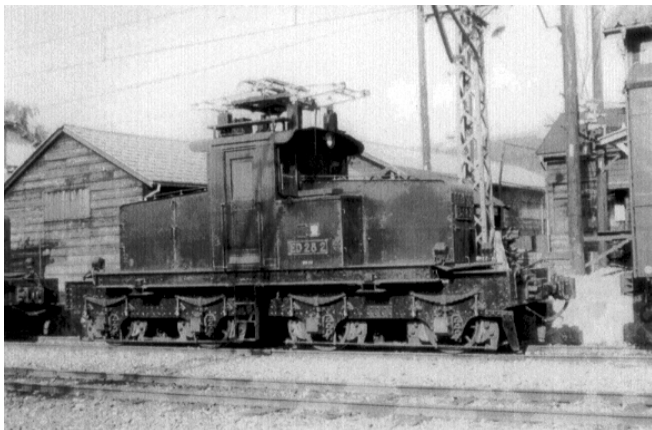
Many of our older train crews came to

us with traditional skills learned from Japanese National Railways (JNR) and they have passed their knowledge on to young crew members who now form the core of the workforce with 20 to 30 years of experience.

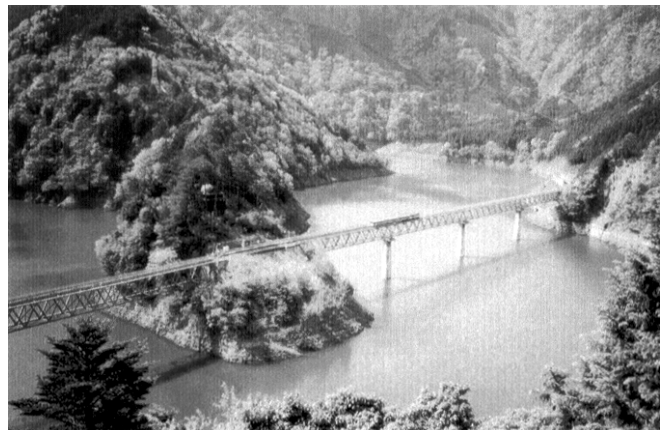
Some of the more traditional skills like fireman require physical toughness too and it is difficult to find men willing to bear the extreme heat on the footplate,

especially during the hot and humid Japanese summers. Our sister railway, the Alishan Forest Railway in Taiwan, has had the same problems. We fire the boiler with bricks made from high-quality coal imported from Vietnam and Australia mixed with block coal—we never burn coke or oil. One hazard of running a steam train blowing soot and sparks through forested mountains is that we sometimes cause smuts on drying laundry and even an occasional forest fire! This explains why the normal electric train services running on the same track always carry water to extinguish any trackside fires. We don't use poor-quality coal because it causes problems with ignition, sparks, etc. The workshop installs new fire grates every 20 years.

Although our workshop has only the most basic machinery, we can handle pretty well every inspection and repair. For example, we still temper pins in the traditional way using potassium cyanide; a British visitor told me that our shop is almost identical to some found on some small preservation railways in England. To reduce scaling, we soften the boiler feedwater using ion-exchange resin and we also inject chemicals. We never do mass blowing but we do flush the boilers each month.



Electric locomotive belonging to Enshu Railway built in 1925 by English Electric and North British (Author)



The Ikawa Line crossing a dam lake

(Author)

Other Preserved Infrastructure

In addition to the preserved rolling stock, the Oigawa Railway also has an old British Ransoms and Rapier turntable built in 1897—it is 50-ft long, can take a load of 90 tonnes and is still in working order. Enshu Railway and JR East's Iida Line near us also have two electric locomotives built by English Electric and North British in 1926. I have loved them both since my childhood.

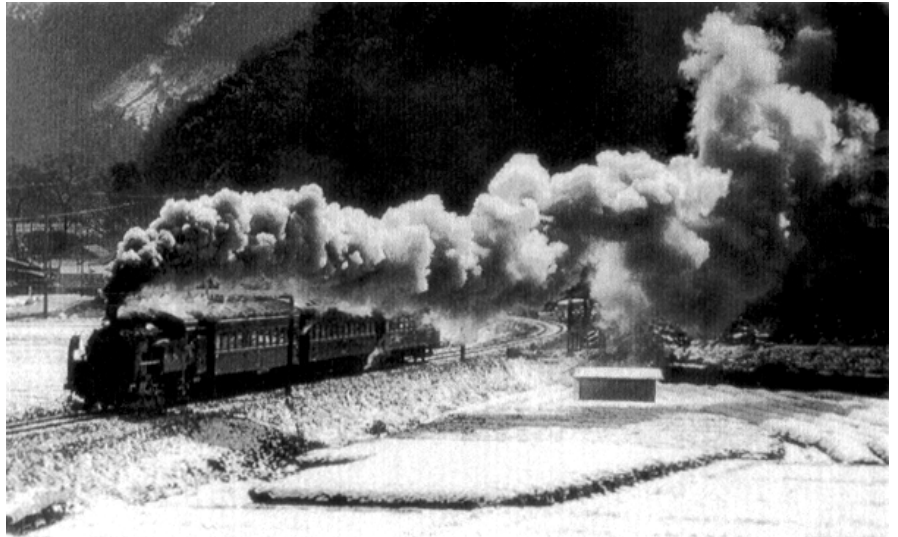
Sister Railways

In addition to promoting local tourism in Shizuoka, we are also proud of our international sister railways—the Brienz Rothorn Railway in Switzerland and the Alishan Forest Railway in Taiwan. We hold exchange visits with both railways each year in the spirit of friendship and cooperation. By the way, in the same spirit of friendship, we would welcome information about possible sources of compressors—ours are showing their age.

The Future

Although our equipment, infrastructure (and some staff) are old and we sometimes face practical and financial difficulties in keeping our preserved rolling stock in working order, the continued enthusiasm of our 200,000 annual visitors for these relics of a bygone age, fills me with hope that we shall be able to continue showing new generations of engineers the excitement of steam! ■

This article was first presented at the international conference 'Slow Train Coming: Heritage Railways in the 21st Century,' held in York in September 2001.



Oigawa Railway steam train running through very rare snowfall

(Author)



Dübs 0-6-2 tank engine on British Ransoms and Rapier turntable. The engine is now preserved at Nippon Institute of Technology. (Author)



Akira Shirai

Mr Shirai joined Nagoya Railroad in 1948 after graduating from Nagoya Technical College. He joined Oigawa Railway in 1969 becoming Chief Engineer and Vice President in 1987. He is now Consultant to Oigawa Railway.