

Driving Steam Locomotives in Poland

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National Capital Land Transportation Committee

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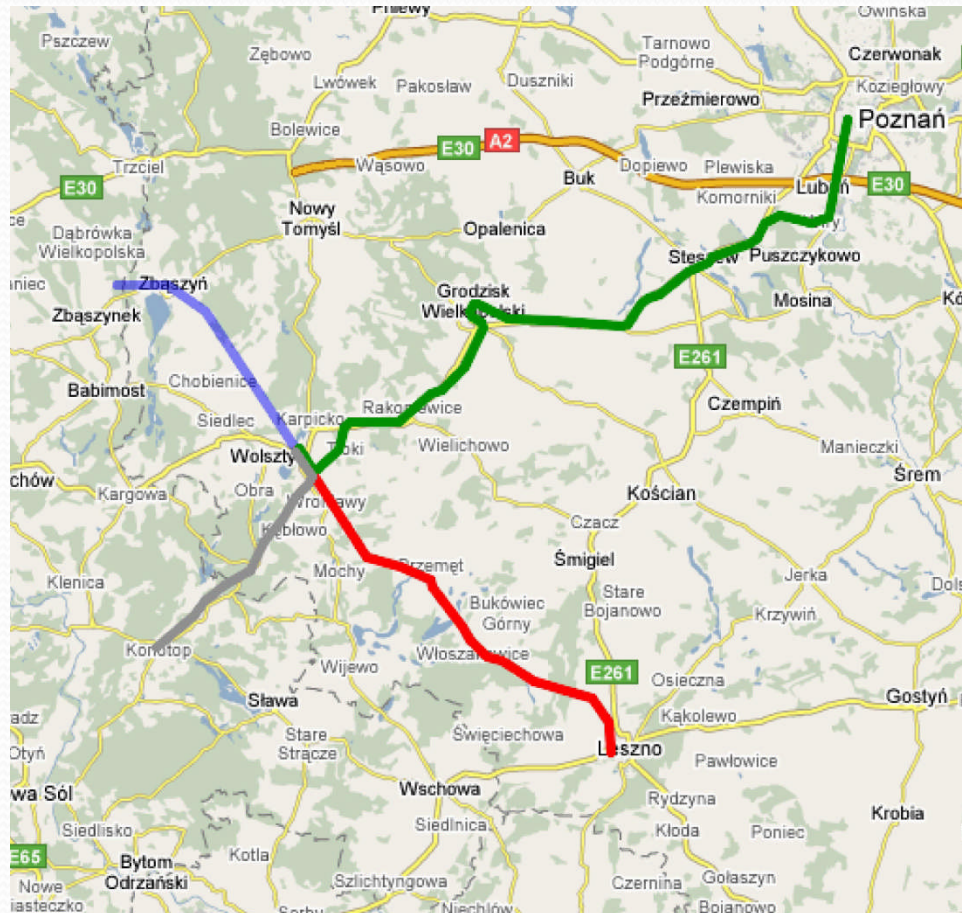
The Last Stand of Mainline Steam

- The last mainline revenue service steam powered trains in Europe run out of Wolsztyn Poland.
- Base service is provided by two or three locomotives handling six to eight trains on two or three lines.
- Wolsztyn is the last exclusively steam standard gauge engine shed in Europe.
- It is the only place in the world that non-railroad employees can run steam locomotives in scheduled service.

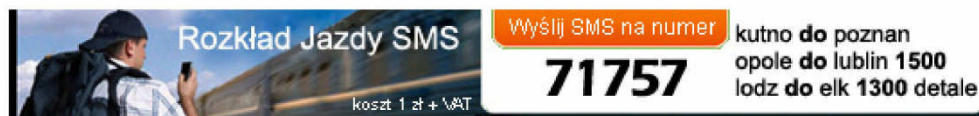
Poland in Europe



Wolsztyn Steam Network



Buy your ticket at the station...



Rozkład Jazdy SMS Wyślij SMS na numer **71757** kutno do poznan
opole do lublin 1500
lodz do elk 1300 detale
koszt 1 zł + VAT

REKLAMA

Journey guide

Station/Stop	Date	Arr.	Dep.	Platform	Products	Comments
Wolsztyn	20.03.08		05:27		77425	Osobowy
Tłoki		05:34	05:35			2nd class only Steam train
Rostarzewo		05:39	05:40			
Rakoniewice		05:44	05:45			
Drzymałowo		05:48	05:49			
Ruchocice		05:53	05:53			
Grodzisk Wlkp.		06:02	06:03			
Ptaszkowo Wlkp.		06:11	06:11			
Granowo Nowotomyskie		06:17	06:24			
Strykowo Poznańskie		06:31	06:31			
Stęszew		06:41	06:41			
Trzebaw Rosnówko		06:46	06:47			
Szreniawa		06:51	06:52			
Wiry		06:58	06:59			
Luboń k. Poznania		07:05	07:06			
Poznań Dębiec		07:09	07:10			
Poznań Główny		07:17				

Duration: 1:50; runs daily

More - Railway Information: +48 22 9436 Software/Data: HAFAS 5.02.PKP.4.5 - 20.03.08 © 2003 HaCon
Ingenieurgesellschaft mbH Timetable valid from 09.12.07 to 13.12.08.

Jakiekolwiek reklamacje oraz skargi związane ze świadczonymi przez przewoźników usługami powinny być kierowane bezpośrednio na adresy przewoźników. Więcej...

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Why does steam survive in Poland?

- Both dieselization and electrification were delayed by the communist government.
- Economic development lags Western Europe.
- Wages are low, coal is cheap.
- Lucrative international tourist trade.
- Growing national pride.
- The vision of Howard Jones and the *Wolsztyn Experience*.
- The cooperation of the PKP.



Wolsztyn Experience

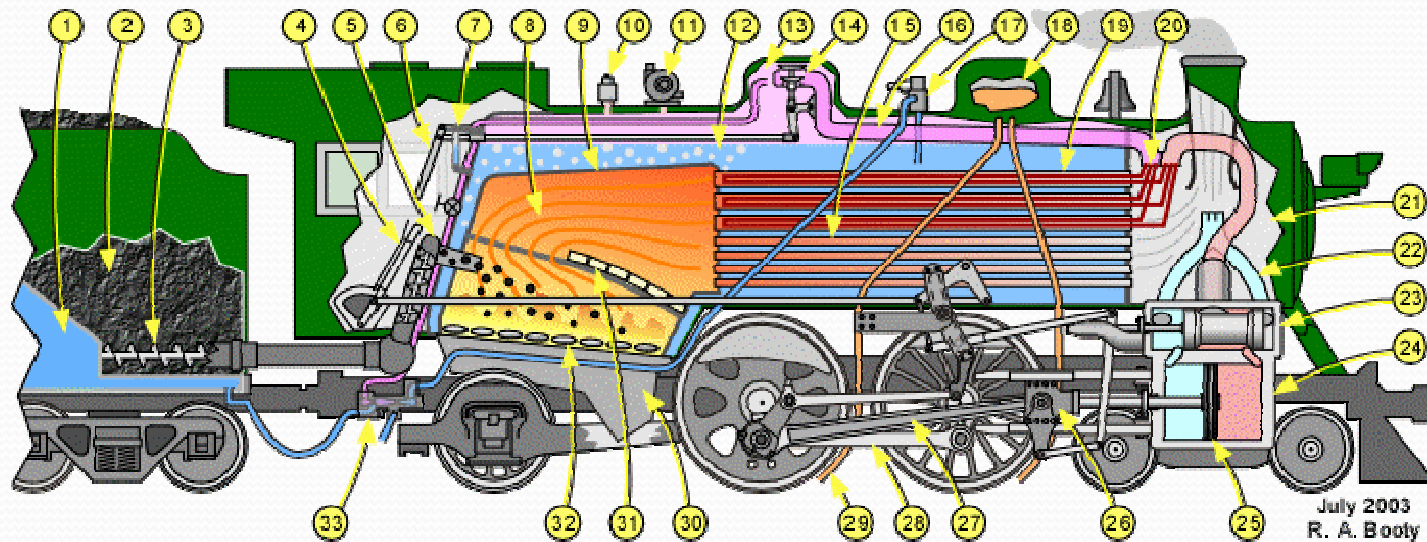
- “The Wolsztyn Experience is a British company operating in tandem with a charitable trust in western Poland, near the German border.”
- A week long stint as a student locomotive driver.
- A guarantee of 5 round trips.
- Generally six students per week. Two students per run.
- Course is “conducted” in English.
- The waiting list is a year long.
- Many repeat customers.



Polish facts and rumors

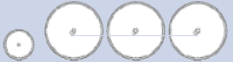






- Firing and driving are the same craft. The drivers generally switch off at the end of runs.
- Normal pay is ~\$200 per month. Wolsztyn Experience pays driving teachers an additional \$1,000 per month.
- There are about 12 driving teachers. All senior men.
- The WE program shuts down in July and August because that is when the drivers take vacation.
- Howard Jones was awarded a Member of the Order of the British Empire (MBE) in 2006 for “services to steam railways in Poland and for UK-Polish relations.”
- The steam locomotives are owned by PKP Cargo.
- WE has had two five-year contracts. The last expired at the end of 2007.

Inside a Steam Locomotive



- | | | | |
|-----------------------------------------|--------------------------------|-----------------------|-------------------|
| 1. Water Compartment | 10. Safety Valve | 18. Sand Dome | 26. Crosshead |
| 2. Coal Bunker | 11. Turbine-Generator | 19. Flue Tubes | 27. Main Rod |
| 3. Worm Coal Conveyor | 12. Boiler Water | 20. Superheater Tubes | 28. Side Rod |
| 4. Reverse Lever (<i>Johnson Bar</i>) | 13. Steam Dome | 21. Smokebox | 29. Sand Pipe |
| 5. Stoker | 14. Throttle Valve | 22. Blast Pipe | 30. Ashpan Hopper |
| 6. Throttle Lever | 15. Boiler Tubes | 23. Steam Chest | 31. Brick Arch |
| 7. Water Gauge | 16. Dry Pipe | 24. Cylinder | 32. Grate |
| 8. Firebox | 17. Water Delivery Check Valve | 25. Piston | 33. Injector |

Locomotive Wheel Arrangements

	Whyte	Name	UIC	Poland
	2-6-0	Mogul	1C	I
	2-6-2	Prairie	1C1	L
	4-6-0	Ten-Wheeler	2C	K
	4-6-2	Pacific	2C1	M
	2-8-0	Consolidation	1D	R
	2-8-2	Mikado	1D1	T
	2-10-0	Decapod	1E	Y

Frederick Methvan Whyte (1865 – 1941) was a mechanical engineer of Dutch background who, while working for the New York Central Railroad in 1900, developed Whyte notation to describe wheel arrangements of steam locomotives.

PKP Locomotive Designations

- Service Class/wheel arrangement/year designed/serial number
 - T – Towarowa (Freight service)
 - O – Osobowa (Local Passenger service)
 - P – Pospieszna (Fast Passenger service)
- Pm36-2 decoded:
 - Fast Passenger service
 - 4-6-2 Pacific
 - Designed in 1936
 - #2 in series



The Wolsztyn Fleet

Class	Year Built	Wheel Arr.
Tki3	1908	2-6-0
Ok1 (2)	1917	4-6-0
Ty1	1919	2-10-0
Tr5	1921	2-8-0
Ok22	1929	4-6-0
Pm36	1937	4-6-2
Ty5	1940	2-10-0

Class	Year Built	Wheel Arr.
Ty2 (3)	1943	2-10-0
Ty3	1944	2-10-0
Pt47 (3)	1946	2-8-2
Ty43 (2)	1948	2-10-0
Ty45	1949	2-10-0
Ol49 (6)	1953	2-6-2
Tkt48 (2)	1956	2-8-2T
Ty51 (2)	1956	2-10-0



2-6-2 Prairie Locomotives

- The first 2-6-2 was built for a New Zealand narrow-gauge shortline in the 1880s.
- The Chicago, Burlington & Quincy took delivery of the first standard gauge 2-6-2 tender locomotive in the 1900 for use in midwestern prairies. Brooks Loco.
- 2-6-2s were the standard Russian passenger locomotive from 1928 to 1979. More than 2,700 built between 1911 and 1951.
- The PKP Ol49-class is a modernized version of the Russian Su-class design.

PKP O149 Characteristics

	Metric	US Customary	PRR K ₄
Wheel arrangement	1C1	2-6-2	4-6-2
Cylinder dia./stroke	500/630 mm	19.7/24.8 inches	27/28 inches
Driving wheel dia.	1,750 mm	68.9 inches	80 inches
Grate area	3.7 m ²	39.8 sq. ft.	69.9 sq. ft.
Heating surface	159.4 m ²	1,716 sq. ft.	4,046 sq. ft.
Superheater	68.3 m ²	735 sq. ft.	1,147 sq. ft.
Boiler pressure	1.4MPa	200 psig	205 psig
Tractive effort	10,810 kg	23,800 lbs.	44,460 lbs
Length over buffers	20,675 mm	67.8 ft.	83.5 ft.
Weight, working order	83 t	183,000 lbs	308,890 lbs
Weight, adhesive	52 t	114,640 lbs	201,830 lbs.
Top speed	100 km/h	62 mph	100 mph



Life on the footplate

- Training – five minutes with Howard Jones in the cab
- Communication – a tap on the shoulder and a few words of English.
- Polish crew makes up train and takes it out of yard and through interlockings.
- Lock the reverser wheel before taking your hand off.
- Don't go into emergency.
- Buy expensive artifacts from the driver.
- Buy the driver a vodka for each station overrun.



A typical run

- Wait for conductor or station master signal.
- Open throttle to about 0.8MPa.
- Blow down boiler.
- Reduce cutoff in stages to 50, 40, 30%.
- Blow whistle at anything vaguely looking like a crossing. Long blast if there are cars at the crossing.
- Shut off throttle – immediately set cutoff to 60%.
- Coast to station approach sign board.
- Apply brakes until engine is near platform.
- Release brakes and coast to stop.



My Trips September 10-15, 2007

- Monday – Drove Ol49-111 roundtrip to Leszno.
- Tuesday – Fired and drove Ol49-23 round trip to Poznan with Bob Huff.
- Wednesday – Fired and drove Ol49-111 round trip to Leszno with Bob Huff. Injector failed.
- Thursday – Drove Ok22-31 on ferry run to Leszno.
- Friday – Day off.
- Saturday – Drove Pm36-2 to Zbaszyn on ferry run. Drove Ol49-111 to Konotop with Chris Wiley on picnic train. Tender first back to Wolsztyn. Express to Leszno. Returned empty to Wolsztyn. Hours of service: 4am to 9:30pm.
- 12 runs on 4 lines, 4 engines of 3 classes, 350 miles.