

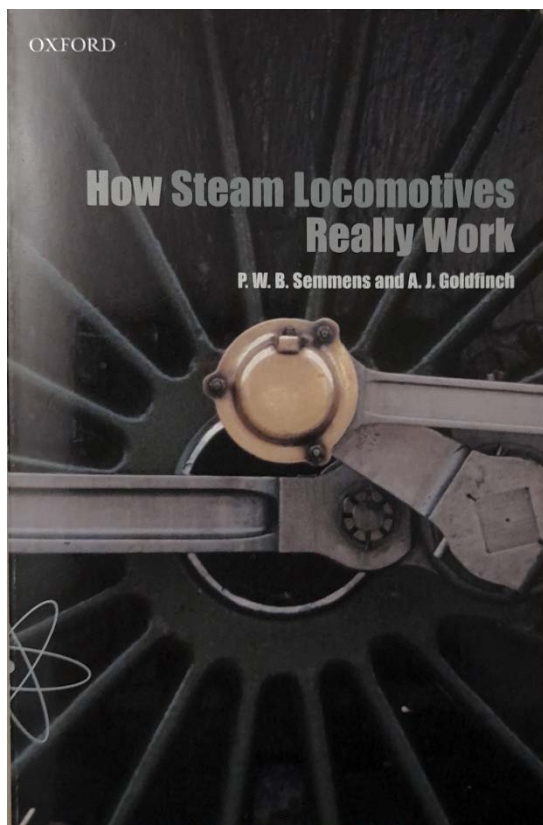
## How Steam Locomotives Really Work

By

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This is a paperback book 340 pages of essential information, first published in 2000 so is a 'modern book'



I would recommend this book to someone taking their first interest into Steam Railways who doesn't have a deep 'technical knowledge' of the components, construction and operation of Main Line Steam Traction.

It is also a useful book for those familiar with 'main line' steam as it is a good refresher, as often a new perspective can clarify the odd points that were 'glossed over' in previous training

The topics are covered in good detail and in a logical order starting from 'why' use steam. The burning of fuel and its challenges.

Raising steam with all its associated difficulties of maintaining the safe operation of the pressure system.

It moves on to how the energy of steam is harnessed, the need to put steam into the cylinders at the right time and exhaust efficiently, the further developments, exploring greater efficiency of compounding and turbines.

Having the power is only part of the story, that power now has to be transmitted to the tractive effort via the frame and wheels, like all moving parts friction saps power, and lubrication cannot eliminate wear.

The vehicle that is the 'Locomotive' has to be stable and steady, go round corners, negotiate 'points', be able to get 're-fuelled/ stocked' quickly and efficiently. 'One Size Fits All' doesn't work here either, there are many tasks a 'Steam Locomotive' has to perform, so there are many variations to cope with the needs.

Having got the 'beast' moving, it has to be stopped, again the options and problems are covered.

The book has plenty of photographs, regrettably as they are of 'old' Locomotives' so are black and white but they illustrate the points made perfectly.

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Tony Ashgrove. November 2024