

STEAM LOCOMOTIVE

Steam locomotives are impressive , captivating , ingenious , complex and dangerous devices all wrapped with a single frame . Nothing else in railroading has ever been quite as alluring .

Before the steam locomotive arrived , it was necessary to solve two problems:

- improve the steam engine by inventor James Watt ,
- build a steam machine by inventor Nicolas-Joseph Cugnot .

The locomotive's idea emerged as a solution for transporting the material from the mining galleries that were carried out with animals . The first steam locomotive appeared , this being a machine that circulated on metal rail (initially made of wood) and was propelled by the force of steam .

In the classic version , burning a fossil fuel is heating the water in a boiler , generating steam that pushes a piston , driving a white-crank device connected to the locomotive wheels .

The coupling system of the locomotive wagons supports the traction force at the hook needed to tow them . The pushing force of the brake is absorbed by the coupling pads .

The steam locomotives have been equipped with a grating at the front for the purpose of removing from the rails of possible objects , thus avoiding derailment . This solution is chosen , because the heavy-duty locomotive , can not brake for a short distance .

In North America , Australia and Africa , the gratings were built bigger and stronger dimensions , due to the fact that in those regions the trains traveled widely through wild areas heaving to deal with massive animals and other problems caused by local fauna .

Classification of steam locomotives is due after the arrangement of the wheels , using figures as follows : number of steering wheels , number of traction wheels (motors) and number of supporting wheels (example : 2-4-2 ; 2 signifies the front wheels , steering axle mounted , 4 signifies 2 pairs of motor axles and 2 signifies a pair of support wheels for the driver's cab and / or part of the boiler .

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