

Lemaître

It was in 1932 that M. Lemaître, an engineer of the Belgian Nord, proposed a five-orifice system with a central orifice in which a closing valve was mounted. This unit was tested and after some systematic tests shown in Figure A.27.1, a standard system was defined and used on a number of locomotive series. The locomotive selected for the tests was the four cylinder compound 3.1290. M. Ledard described the results<sup>1</sup>. The test results are given in Figure A.27.2.

FIGURE 4  
LOCOMOTIVE 3.1290 — COMPARAISON DES DÉPRESSIONS ET CONTRE-PRESSIONS DES DIVERS ÉCHAPPEMENTS AU CRAN 6

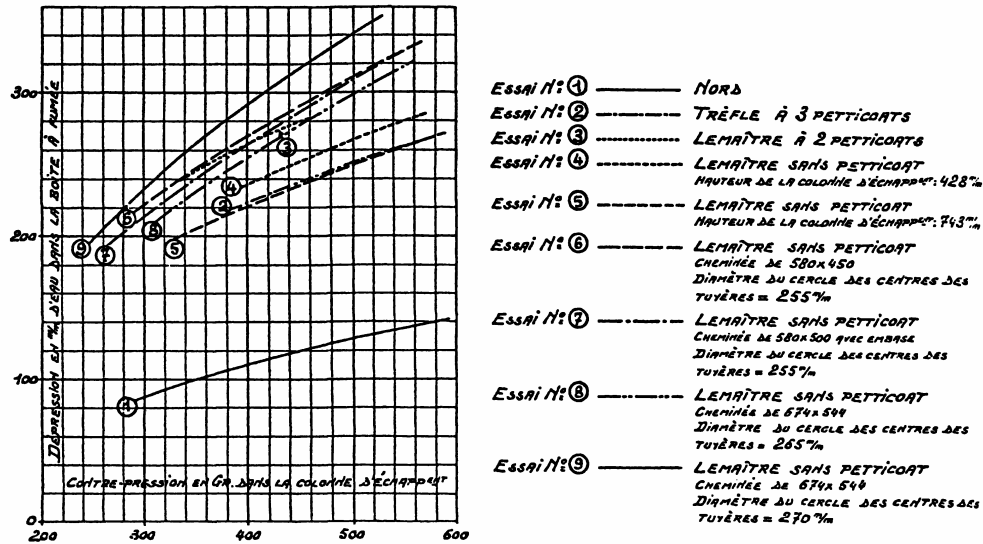
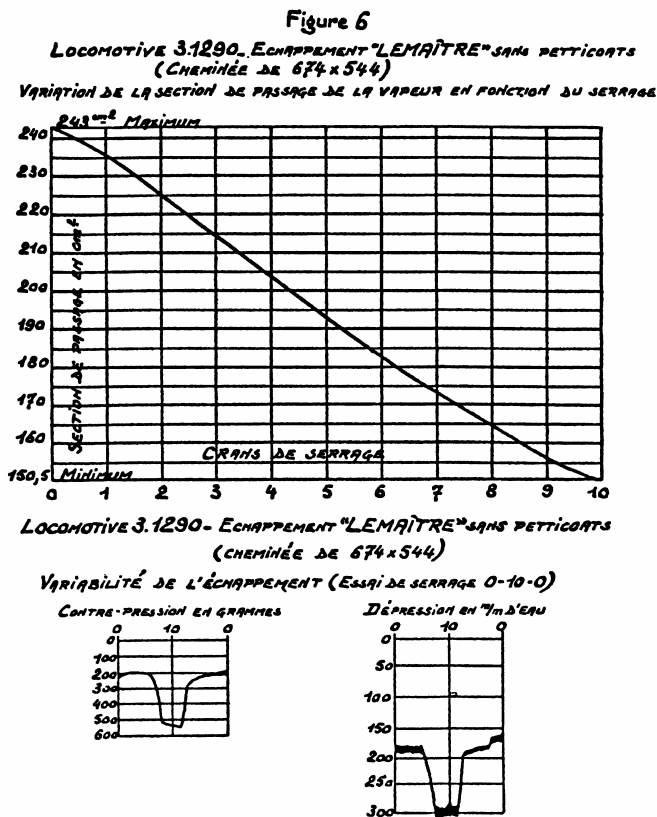


Figure A.27.2 Comparison of the vacua and counterpressures of the different exhausts



The total area of the exhausts could be varied from 243 to 150 cm<sup>2</sup>, shown in Figure A.27.3, by moving a pointed valve in the central orifice. The tests were made with the valve in position 6, leading to an area of about 180 cm<sup>2</sup>. No data are given on the original single orifice. It is assumed that this also had an area of about 180 cm<sup>2</sup>.

Figure A.27.3 Variation of the orifice area