

## Management and Efficiency of the Royal Dockyards, 1775-1833: The Problem of Piece-Work\*

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Low worker-productivity was a chronic problem in the royal dockyards in the eighteenth and nineteenth centuries. Task work was introduced as a remedy in 1775, being used for building ships and for ships requiring extensive repair. Each class of ship was divided into twenty-five sections, for each of which a labor price was fixed, to be divided equally among the shipwrights who had done the work. A few years later small repairs were undertaken at first by the job but eventually by the piece, according to the numerous small parts into which a ship's hull might be divided, a method which was generally used from 1793. Piece-work was unfortunately adopted without consideration and conducted without system or attention. The men's earnings were limited to a certain amount until 1803, but the shipwright officers at each yard set whatever prices they chose and the accounts were often falsified. As a result the men were paid nominally according to the amount of work they did but actually according to the number of hours they worked, all of them receiving the maximum allowable wage, so that piece-work was in effect a disguised pay rise. Various measures were adopted between 1801 and 1811 to eliminate these abuses and make piece-work efficient. The sectional scheme of 1775 was supplanted by the piece-work system in the latter year and a new scheme comprehending even the smallest items was devised for new work as well as repairs. The ceiling on earnings was restored in 1816 and it soon became apparent that the old abuses had not really been corrected. Nor did there seem to be any very effective remedy. Moreover, with a peacetime establishment of shipwrights which much exceeded requirements, even limited piece-work made no sense. For this reason it was suspended in 1833, but subsequently revived during the Crimean War. Two inquiries into the system in 1859 and 1861, condemned it without qualification. Except for the thirteen years when unlimited earnings were permitted, piece-work was a basically dishonest and exploitative system which held out to the workmen the largely illusory prospect of increasing their wages in proportion to their industry. It can only have exacerbated the problem of productivity by demoralising the men. The actual operation of piece-work reveals, moreover, a system of management so loose and lacking in purpose or method that the failure of piece-work itself was inevitable.

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