

# BOILER EXPLOSIONS ACTS, 1882 AND 1890.

REPORT OF PRELIMINARY INQUIRY. (No. 2372.)

(Price—TWO PENCE.)

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## Explosion from a Boiler.

The boiler is made of steel, and is of the ordinary single-ended, marine type, with two plain furnaces. It is 12 feet in diameter, internally, and 10 feet long over all. The shell is composed of two plates  $\frac{1}{4}$  inch thick, joined together longitudinally with double butt straps double riveted. The furnaces are 3 feet 10 inches in diameter externally, by 6 feet 9 inches long and  $\frac{3}{4}$  inch thick. The boiler is provided with two combustion chambers of the usual type and constructed for a working pressure of 130 lbs. per square inch. The safety valves, two in number, were stated to have been adjusted to that pressure, and the other usual mountings are provided.

The following are the most recent repairs executed:—1909, a patch was riveted on the starboard combustion chamber back plate at the bottom; 1912, eighteen new tubes were fitted, several tubes were expanded, several rivets in the shell seams were renewed. Both furnaces were found to be slightly down and were jacked up; 1913, several new rivets were put in the shell seams; 1914, twenty-one new tubes were put in the port combustion chamber; twenty-one new tubes were put in the starboard combustion chamber; the front seam was caulked; the wasted parts of the mud-holes were built up by oxy-acetylene welding and the mud-hole doors were re-fitted; the boiler was tested, by water pressure, to 130 lbs. per square inch.

The boiler has been inspected periodically by the owners' superintendent engineer, and by Lloyd's surveyor, the last thorough inspection being on October 4th last year. The boiler was afterwards inspected under steam, on December 18th, and was found to be satisfactory.

The vessel is a small screw-steamer of 142·4 ft. by 21·3 ft. by 10·2 ft. registered dimensions, with a gross and net tonnage of 264 and 104 tons respectively. The vessel was built in 1903. She was engaged in trading generally between ports in the Irish Sea and Bristol Channel.

On January 5th last, the vessel left Avonmouth with a cargo of rye and barley for Londonderry, and on the following morning, about 11 o'clock, whilst the vessel was off St. Govan's Head, steam was seen issuing from the starboard ashpit, followed by a rush of steam and water. It was stated that there was no report or warning. The chief engineer, who was on watch at the time, immediately started the donkey pump on the boiler, but in spite of this the water level rapidly fell in the gauge glass, and in twenty minutes it was out of sight. A platform of planks and boards was constructed on which the men stood to draw the fires, as the stokehold plates were covered with scalding hot water. As soon as it was possible, the chief engineer went into the furnace to make an examination and found a hole in the combustion chamber back plate close to one of the stays in the lowest row. It was oval in shape and about  $\frac{5}{8}$  inch by  $\frac{3}{8}$  inch in size. As there was a strong W.S.W. wind blowing, the weather being very bad, and the vessel only two miles W. 22° S. of Crow Rocks, there was no time to effect even temporary repairs, so signals for assistance were hoisted and another steamer came up and after some difficulty succeeded in towing the vessel into Swansea, arriving there on the following morning. Repairs were effected by the oxy-acetylene process of welding by building up the wasted plate and filling up the hole with new metal until it was quite solid and thicker than originally. The nut of the adjoining stay, a leak from which had been the cause of the trouble, was taken off and the end of the stay was fused by the above-mentioned process, and welded into one solid mass with the plate, so, effectually, preventing a recurrence of the trouble. The vessel resumed her voyage on January 13th, arriving at Londonderry on January 16th without further mishap.

## ELECTION OF MEMBERS.

Members elected at Council Meeting held on Tuesday,  
October 12th, 1915.

### *As Members.*

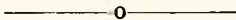
Alfred Lewis Cooke, 9, Minster Road, Cricklewood, N.W.  
Shavak C. Driver, Khatwadi Back Road, Girgaum, Bombay.  
John James Corbett, 9, Stopford Road, Upton Manor, Essex.  
Jamis Macfarquhar, 54, Ainslie Gardens, Hyndhead, Glasgow.  
William Bayley, 143, Balaam Street, Plaistow, London, E.  
Fred. Wood, 20, Queen's Road, Doncaster.  
Thomas Daniel Kelly, 19, Willburn Crescent, Hove, Sussex.

### *As Associate Member.*

Idwal Wm. Jones Evans, 59, Alexandra Road, Canton, Cardiff.

### *As Graduates.*

F. E. Banner, 122A, Sebert Road, Forest Gate, Essex.  
G. A. Hawthorn, "Toledo," Blakehall Crescent, Wanstead,  
N.E.



a local body representative of higher education and of the commerce of the district should be formed to organise the supply and training of women clerks, and on our recommendation they have addressed a letter to the Secondary Education Authorities throughout England and Wales asking them to take steps to set on foot a scheme for this purpose with the least possible delay. We would refer to this circular for the full details of the scheme, but we may briefly state here that the task of the suggested local bodies or committees will be :—

(1) To ascertain the present and prospective requirements of employers in the locality, both as to the number of substitutes and the kind of training.

(2) To organise training classes of an emergency character for giving a general groundwork in commercial knowledge and office routine. The needs of any important class of business carried on in the locality will no doubt receive special consideration.

(3) To take steps to attract women of sufficient education to this class of work.

(4) To compile a register of those who pass through the emergency classes with a view to getting them placed in employment.

Schemes on these general lines are already on foot in London, Manchester, and other places, and from an informal conference we have had with the authorities of some of the most important provincial cities we gather there will be no difficulty in carrying out our proposals. In London and other areas where the business districts and the residential districts are under the jurisdiction of different authorities, it will be desirable that there should be consultation and co-operation between the authorities to avoid overlapping, and waste of effort, and we hope that arrangements will be made for this purpose. In centres where the local authority is not an authority for higher education, the arrangements should, we think, be made in consultation between the higher education authority and the local authority of the district. It will be desirable that wide publicity should be given to the arrangements which are made by the local committees.

In considering the question of the organisation of a supply of clerical workers we have borne in mind that there are

already in existence at the Labour Exchanges arrangements for registering applications from persons desirous of obtaining clerical employment. It is important to avoid any duplication of work between the two bodies, and we have suggested in the circular to the local authorities that arrangements should be made to co-ordinate the work of the local Committee with that of the local Labour Exchange as much as possible. We understand that the Board of Trade are willing to consider with the local Committees the question of making special arrangements for the purpose. We cannot too strongly urge all employers of clerical labour to review at once their position in connection with the operation of the new recruiting scheme, and to consider what reorganisation of their arrangements and staff will be required to enable them to meet, without undue dislocation, the loss of men which is imminent. If full information of their probable requirements is supplied by them to the local Committees at an early date we believe that the difficulty will be minimised, but it is essential that action should be taken at once. We have accordingly addressed a circular to a number of commercial and professional associations, many of whom were represented at the conference at the Home Office, asking them to call the attention of their members to the urgency of the question and to inform them of the steps which are being taken to provide substitutes.

We would express a strong hope that it will be made clear that the employment of the women who are brought in to act as substitutes during the present emergency, under the scheme which we have suggested, is intended to be temporary, for the period of the war only, and that employers will give an assurance to the men who are offering for service that their places will be kept open for them. So far as the evidence we have been able to obtain goes, this is the general rule, and we are happy to be able to say that many cases have come to our notice in which generous provision is made by the employers for the dependants of enlisted men. It is probable that the demand will for some time be more than sufficient to absorb the largest number of trained women that the local Committees will be able to supply, but the Committees will no doubt bear in mind the importance of not training for this class of work a greater number of women than is likely to be required. Further and heavy demands in connection with other



occupations are bound to be made on the available reserves of women in the near future, and it is not of course desirable that the risk should be incurred of depressing wages below a fair rate by bringing into the market a greater number of workers than is needed. We venture to suggest that in the present emergency the scale of wages payable to women should, as far as conditions permit and as the work deputed to them reasonably justifies, be based on the rate of wages paid to men who have been engaged in similar duties. It has been brought to our notice that difficulty will be experienced in many offices in making the necessary provision for separate sanitary accommodation for women clerks. A similar difficulty has already been experienced in connection with the substitution of women for men in factories and shops, and the Local Government Board has issued a circular to local authorities with regard to shops, recommending that during the present emergency they should accept such temporary arrangements as may sufficiently meet the needs. We are confident that local authorities will be ready, through their medical and sanitary staffs, to assist employers in every possible way in dealing with this matter. It appeared from communications received by us that, in the case of banks, the difficulties which will be caused by the loss of staff might be lessened if the hours during which banks are open to the public were shortened, and that the banks would be disposed to consider favourably a proposal to that effect. They were good enough at our instance to address a letter to the Committee of London Clearing Bankers inviting them to consider the suggestion, and we are informed that the Clearing Bankers have decided in favour of earlier closing and are engaged in considering a scheme for carrying it into effect.

We desire to add that strong representations have been made to us by shipping, banking, insurance, and other important business and professional concerns, as to the importance of retaining a sufficient nucleus of trained men to carry on the businesses which are essential to the maintenance of the national commerce and finance. A very great number of men can be spared, if the framework of the business organisation is left intact. We understand that in connection with the new recruiting scheme lists are being compiled of occupations which are of cardinal im-

portance for the maintenance of certain trades and industries, and in the circular which we have addressed to commercial and professional associations we have suggested that they should prepare for the consideration of the authorities a reasoned statement in respect of the business or businesses represented by the association as to the classes of specially skilled or experienced employees, if any, of whom some must be retained in order to enable the business to be carried on, and as far as possible the number which is regarded as essential. We would express our grateful acknowledgment of the great assistance which we have received in the preparation of our scheme from Sir L. A. Selby-Bigge, the Permanent Secretary of the Board of Education, who has been in consultation with us throughout. He has also been so good as to arrange that the advice and assistance of the Inspectors of the Board shall be, so far as their other duties permit, at the disposal of the local Committees in the organisation and working of the suggested schemes.

## [CIRCULAR.]

At the Conference held at the Home Office on Thursday, 28th October, it was decided that my Committee should issue to the several organisations there represented a statement showing what steps the Committee propose to take with a view to assisting employers in replacing men withdrawn for service with the military forces.

From the evidence already before my Committee it is clear that the supply of men who are over military age or who have been rejected by the authorities as unfit for military service is wholly inadequate to satisfy present and contingent demands. Of men who have been invalided out of the Army, and who will generally be regarded as having a first claim on the labour market, comparatively few have yet been returned to civil life. Lads under military age are being largely employed as substitutes for enlisted men, but here again the supply is short, and this expedient is subject to the serious disadvantage that if the employees are not far short of military age they may leave the employer just at the time when they are becoming useful.

Undoubtedly, it is to the ranks of women that employers of clerical labour must chiefly turn for substitutes. In some of the larger and more highly organised concerns

—banking, insurance and the like—employers, we are informed, have so far experienced little difficulty in replenishing with women their depleted staffs. The women in those cases are very often the friends or relatives of members of the existing staff. We believe that a considerable part of the problem will be solved if large employers will adopt this means of replacing enlisted men. The women clerks so engaged are employed at first, at all events, in the more elementary branches of clerical work, and in a surprisingly large number of cases no previous business training seems to be required.

It is certain, however, that in the near future, as men are called up for the forces under Lord Derby's scheme, there will be a great and increasing demand in all commercial centres for clerical labour which the sources of supply that I have alluded to will be altogether unable to meet, and my Committee have accordingly decided to approach immediately the local authorities in all important towns and invite them to start at once schemes for organising a supply of clerical workers and for fitting them, so far as can be done in the time available, by emergency classes to supply the places of the men who will have gone. We are informed that in London and Manchester, to name two great centres, steps in this direction have already been taken and we hope that similar schemes will soon be set on foot in every important commercial centre in the kingdom. Local Authorities undertaking this work will be invited to co-operate closely with employers in their respective areas, and among other things:—

- (1) to prepare as careful an estimate as possible of the existing and contingent demands for clerical labour,
- (2) to advise and initiate suitable courses of instruction,
- (3) to take steps to attract a supply of women of sufficient education, and to keep a register of those who pass through the emergency classes.

You will remember that in the course of his remarks at the Home Office Conference, Lord Derby laid special stress on the desirability of giving a preference in employment to the women relatives of enlisted men. The separation allowance in the case of most enlisted clerks will go but a little way towards maintaining the man's family in the position to which they have been accustomed. Rent,



insurance, schooling for his children—these and other liabilities must be discharged in his absence, and, if his wife is able and willing to undertake clerical duties, her claim to a preference in employment will not be denied.

In the interests of recruiting it is highly important that the places of enlisted men should be kept open for them. This is an honourable rule, and so far as we are aware, a practically universal one in the branches of employment we are considering. No less desirable is it that the employment of substitutes for enlisted men should be known to be and declared to be temporary and for the period of the war only.

I would invite each Association as soon as possible to issue a circular to its branches and individual members informing them of the steps which are being taken to provide the substitutes that will be necessary, and impressing on them the importance of considering at once how their arrangements can best be remodelled as their present men are called up, and what number and class of women or other substitutes they will require.

Lastly, as regards the question which was raised at the conference as to the exemption from military service of men regarded by the employer as indispensable for carrying on his business, my Committee are informed that the arrangements on this point are now under consideration, but they would suggest to your [Association] the great desirability in the meantime of preparing for the business or businesses represented by the [Association] a reasoned statement as to the classes of specially skilled or experienced employees, if any, of whom some proportion must be retained in order to enable the business to be carried on, and as far as possible the proportion which is regarded as essential. If every care is taken to present only bedrock figures we cannot doubt that such a statement with the authority of your Association behind it would carry great weight with recruiting authorities. Any such statement if sent to us will be forwarded immediately to the authorities.

I am,

Yours very faithfully,

(Signed) CECIL HARMSWORTH.

