OXY-ACETYLENE WELDING PRACTICE. A PRACTICAL PRESENTATION OF THE MODERN PROCESSES OF WELDING, CUTTING, AND LEAD BURNING, WITH SPECIAL ATTENTION TO WELDING TECHNIQUE FOR STEEL, CAST IRON, ALUMINUM, COPPER, AND BRASS

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INTRODUCTION

HIGH-TEMPERATURE flames, such as the oxy-hydrogen flame, were known for many years, but the oxy-acetylene flame was first used experimentally in 1901 by Fouché and Picard. The same experimenters also developed the first welding blowpipes, used industrially in 1903, and started the developments in oxy-acetylene welding which were destined to become so important in the modern manufacturing and repair fields. Cutting by means of oxygen was first made commercially possible in 1905 by Jottrand, who took out his basic patent in that year.

¶ Many difficulties were encountered in the early development, owing to imperfect knowledge of the character of the flame and of the technique of the method of application, but notwithstanding these difficulties, the oxy-acetylene welding and cutting processes have developed wonderfully, especially during the last ten years, during which time they have replaced old methods and have made possible operations which hitherto could not be accomplished. The discovery of liquid air greatly decreased the cost of oxygen, and the increase in the number of oxygen supply points throughout the country has removed the last obstacle to the rapid advance of the art. Everywhere manufacturers are very willing to supplant their old methods by the oxy-acetylene process.

¶ Their rapid increase in the number of plants using the process has produced an active demand for skilled operators, a demand which unfortunately has been always much greater than the supply. However, now that the apparatus on the market has become standardized and our knowledge of good oxy-acetylene practice has reached a point where methods can be carefully outlined, the publishers of this little volume feel that an authoritative article on this subject will be appreciated by the many persons interested in the welding field. The material has been written for the welding operator as well as for the superintendent and manager. The examples have been taken from the automobile industry because in that field almost every phase or class of welding is covered, and while the instructions and data deal with automobile welding in particular, the repairman and manufacturer will find no difficulty in applying this information to their own particular needs. The publishers will be very glad to give special information to any reader, either through their own experts or through the help of the author himself.

OXY-ACETYLENE WELDING IN AN AUTOMOBILE REPAIR SHOP

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