

SUMARIO

<i>Introduction</i>	9
J. DELAINE, S. CAMPOREALE, A. PIZZO	
I. CONCRETE TECHNOLOGY AND USE	
<i>Technological confidence in Late republican and imperial era Roman architectural and maritime concrete construction</i>	15
M. D. JACKSON	
<i>L'uso delle polveri pozzolaniche nei grandi cantieri della Gallia Cisalpina durante l'età romana repubblicana: i casi di Aquileia e Ravenna</i>	29
J. BONETTO, G. ARTIOLI, M. SECCO, A. ADDIS	
<i>Lime mortar production in Ostia: material analysis of mortar from the Hadrianic period</i>	45
J. WEHBY MURGATROYD	
II. STRUCTURAL AND CONSTRUCTIONAL USES OF METAL	
<i>The bronze truss of the portico of the Pantheon in Rome</i>	59
D. HEINZELMANN, M. HEINZELMANN	
<i>"Armored" columns in the Roman imperial period</i>	75
C. M. AMICI	
III. PRODUCTION, SUPPLY AND USE OF BRICK AND TILE	
<i>The social life of tile in the Roman world</i>	87
P. MILLS	
<i>Ceramic building material: production, supply and use in Roman London</i>	99
I. M. BETTS	
<i>Tegulae mammatae or lateres? On the presence and use of tegulae mammatae in the delta of the Rhine</i>	111
A. G. GAZENBEEK	
<i>The end of the tegulae mammatae? A review on their name, function(ality) and presence in the Roman North</i>	121
T. CLERBAUT	
IV. PRODUCTION, SUPPLY AND USE OF MUD-BRICK AND PISÉ DE TERRE	
<i>Mud brick and pisé de terre between Punic and Roman</i>	131
B. RUSSELL, E. FENTRESS	

<i>L'industrie de la brique crue dans la colonia Lugdunum. Typologie, approvisionnement et organisation de la production</i>	145
B. CLÉMENT	
V. LIFTING MACHINES IN THEORY AND PRACTICE	
<i>Taking a bearing on Hero's anti-crane and its un-windlass: the relationship between Hero of Alexandria's mobile automaton and Greco-Roman construction machinery, artillery and water-lifting machines.....</i>	167
D. KEENAN-JONES, I. RUFFELL, E. MCGOOKIN	
<i>Lifting blocks, 1st-5th century AD: the inclined plane.....</i>	185
G. MARTINES, M. BRUNO, C. CONTI	
<i>The restoration of the columns of the templum Castoris during Verres' praetorship: the machina and organisation of the building site</i>	201
P. DUCRET	
VI. PRACTICAL SOLUTIONS TO ENGINEERING PROBLEMS	
<i>Costruire in terreni palustri: sistemi di fondazione e bonifica in uso in età romana in Italia settentrionale fra tradizione e innovazione</i>	209
C. PREVIATO	
<i>Facing structural problems in ancient times. A structural assessment during the construction of the Mausoleum of Hadrian.....</i>	231
P. VITTI	
VII. INFRASTRUCTURE AND ORGANISATION OF CONSTRUCTION	
<i>Les techniques et les étapes de la construction des salles de soutènement des thermes de Longeas (Chassenon, France)</i>	251
A. COUTELAS, D. HOURCADE	
<i>Tracce di cantiere dall'area del Capitolium di Brescia: evidenze archeologiche e materiali dai recenti scavi</i>	275
A. DELL'ACQUA	
<i>The 'Lower Agora' of Pergamon. The organisation of a major building site in Roman Asia Minor.....</i>	299
B. EMME, A. ÖZTÜRK (†)	
VIII. THE ORGANISATION OF CONSTRUCTION IN REPUBLICAN AND PRE-REPUBLICAN ITALY	
<i>Quantifying monumentality in a time of crisis. Building materials, labour force and building costs in Late Republican central Italy</i>	317
D. MASCHEK	
<i>Networks and workshops. Construction of temples at the dawn of the Roman Republic</i>	331
P. S. LULOF	
<i>Conclusions</i>	343
L. C. LANCASTER	