

# Contents

<b>1</b>	<b>Summary</b>	<b>1</b>
<b>2</b>	<b>The history and performance of offshore concrete structures</b>	<b>2</b>
<b>3</b>	<b>Project planning and execution</b>	<b>5</b>
<b>4</b>	<b>Design</b>	<b>6</b>
	4.1 General	6
	4.2 Loads	7
	4.3 Design procedures	8
<b>5</b>	<b>Construction</b>	<b>9</b>
	5.1 Construction phases	9
	5.2 Yard/dock specifics	10
	5.3 Construction methods	10
	5.4 Marine operations	12
<b>6</b>	<b>Materials</b>	<b>12</b>
	6.1 Concrete	12
	6.2 Reinforcement and prestressing	13
	6.3 Outfitting	14
<b>7</b>	<b>Durability</b>	<b>19</b>
	7.1 Corrosion of reinforcement	19
	7.2 Freeze-thaw resistance of concrete	19
<b>8</b>	<b>Environmental issues</b>	<b>20</b>
	8.1 Environmental impact	20
	8.2 Decommissioning/recycling	21
<b>9</b>	<b>Concrete in the Arctic</b>	<b>21</b>
	9.1 Oil and gas reserves	21
	9.2 The Arctic	21
	9.3 Interaction with ice	22
	9.4 Interaction with icebergs	23
	9.5 Client perceptions	24
<b>10</b>	<b>Other applications</b>	<b>25</b>
<b>11</b>	<b>Codes and standards</b>	<b>26</b>
<b>12</b>	<b>Bibliography</b>	<b>27</b>