

**SKILLS FRAMEWORK FOR AIR TRANSPORT  
TECHNICAL SKILLS & COMPETENCIES (TSC) REFERENCE DOCUMENT**

<b>TSC Category</b>	Safety and Security Management					
<b>TSC</b>	Fire Prevention and Firefighting					
<b>TSC Description</b>	Minimise the risk of fire and maintain operational readiness to respond to emergency situations involving structural fires					
<b>TSC Proficiency Description</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>	<b>Level 6</b>
		<b>ATP-SSM-2006-1.1</b>	<b>ATP-SSM-3006-1.1</b>	<b>ATP-SSM-4006-1.1</b>	<b>ATP-SSM-5006-1.1</b>	
		Execute fire response protocols and drills to respond to fires promptly and safely	Implement emergency response efforts and ensure teams comply with protocols during firefighting	Oversee progress of emergency response efforts and develop measures to mitigate fires in the airports	Develop coordinated strategies with external agencies to boost fire response efforts and avert the occurrence of fires in the airports	
<b>Knowledge</b>		<ul style="list-style-type: none"> <li>• Topography and layouts of airports</li> <li>• Types of flammable materials and fire hazards in the airports</li> <li>• Features, functions and uses of firefighting equipment and ancillary equipment carried on vehicles</li> <li>• Classification of types of fires and their extinguishing agents</li> <li>• Features and functions of protective clothing and respiratory protection equipment</li> <li>• Emergency escape routes in the airports</li> <li>• Emergency response plans and procedures</li> <li>• Notification procedures during occurrences of fires</li> <li>• First aid and casualty handling procedures</li> <li>• Simulated emergency exercises</li> </ul>	<ul style="list-style-type: none"> <li>• Topography and layouts of airports</li> <li>• Principles underpinning fire science and fire safety engineering</li> <li>• Limitations of firefighting equipment and ancillary equipment</li> <li>• Ventilation control including smoke extraction</li> <li>• Access control procedures</li> <li>• Fire and smoke detection and automatic alarm systems</li> <li>• Purposes and application of aerodrome markers, markings and temporary lighting</li> <li>• Evacuation and sheltering techniques</li> <li>• First aid and casualty handling procedures</li> <li>• Simulated emergency exercises</li> <li>• Local and international guidelines such as International Civil</li> </ul>	<ul style="list-style-type: none"> <li>• Principles underpinning fire science and fire safety engineering</li> <li>• Methods and aids for fire prevention, detection and extinction</li> <li>• Fire and smoke detection and automatic alarm systems</li> <li>• Types of alarms and mobilisation required during occurrences of fires</li> <li>• Principles of setting up control zones and emergency response centres</li> <li>• Management and control of casualties</li> <li>• Strategies for controlling different types of fires</li> <li>• First aid and casualty handling procedures</li> <li>• Simulated emergency exercises</li> <li>• Local and international guidelines such as International Civil Aviation Organization</li> </ul>	<ul style="list-style-type: none"> <li>• Principles underpinning fire science and fire safety engineering</li> <li>• Methods and aids for fire prevention, detection and extinction</li> <li>• Planning parameters in emergency response plans and procedures</li> <li>• Best practices in the areas of crisis management, fire prevention and management</li> <li>• First aid and casualty handling procedures</li> <li>• Simulated emergency exercises</li> <li>• Local and international guidelines such as International Civil Aviation Organization (ICAO) Annex for Aerodromes</li> </ul>	

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			Aviation Organization (ICAO) Annex for Aerodromes	(ICAO) Annex for Aerodromes		
<b>Abilities</b>		<ul style="list-style-type: none"> <li>• Notify relevant agencies and teams to respond to fire emergency situations</li> <li>• Determine the extent, nature and locations of fires to guide response operations</li> <li>• Conduct fit checks to ensure correct protective clothing and respiratory protection equipment are worn</li> <li>• Extinguish fires using appropriate procedures, techniques and firefighting agents to minimise damages</li> <li>• Administer initial emergency aid to casualties to reduce further injuries and suffering</li> <li>• Document findings from inspections according to requirements in operational logbooks</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate and classify severity of fire types to activate teams at the appropriate level</li> <li>• Assess environmental factors to identify potential risks which may hamper fire response efforts</li> <li>• Secure sites of emergency situations to control access to fire</li> <li>• Deploy manpower resources and placement of aerodrome markers, markings and temporary lighting to facilitate emergency responses</li> <li>• Allocate casualties to a place of safety to minimise further injuries during occurrences of fires</li> <li>• Transmit accurate and complete information to command centre to assist decision-making</li> <li>• Compile data on fire incidents to identify root causes of incidents</li> </ul>	<ul style="list-style-type: none"> <li>• Develop strategies to provide clear directions for fire response strategies</li> <li>• Establish control zones and emergency response centres to monitor the progress of fire response efforts</li> <li>• Analyse on-site emergency response capabilities of teams to determine the deployment of additional resources</li> <li>• Monitor progress of fire response efforts to propose alternative plans to control fires</li> <li>• Oversee the evacuation of casualties and ensure they receive immediate medical attention</li> <li>• Analyse data on fire incidents to determine root causes of incidents and accidents</li> <li>• Assess installation of fire prevention systems to alleviate the occurrences of fires in airports</li> </ul>	<ul style="list-style-type: none"> <li>• Devise coordinated plans with external agencies such as hospitals and Singapore Civil Defence Force (SCDF) to boost fire response efforts</li> <li>• Develop simulated emergency exercises to build up officers for firefighting</li> <li>• Integrate best practices and technologies to enhance overall operational readiness of emergency response personnel, vehicles and equipment for firefighting</li> </ul>	