

LSP356

NR-10 - Refresh – Safety for Electrical Installations and Services

Duration	2 days
Target group	Industrial and maritime workers who deal directly or indirectly with electricity.
Prerequisites	<ul style="list-style-type: none"> - RG and CPF; - Passport (expatriate); - Have a NR10 - 40hours certificate of Basic Safety for Electrical Installation and Services.
Objective	Qualify workers from industrial and maritime areas who deal directly or indirectly with electricity.
Contents	<p>Theory – 16 Hours</p> <ol style="list-style-type: none"> 1. Risks in Facilities and Services with Electricity: <ol style="list-style-type: none"> a) Electric shock, mechanisms and effects; b) electric arcs; Burns and falls; c) Electromagnetic fields. 2. Risk Analysis Techniques; 3. Control Measures of Electrical Risk: <ol style="list-style-type: none"> a) de-energization; b) functional grounding (TN/TT/IT); protection; temporary; c) equipotentialization; d) automatic feeding sectioning; e) leakage current devices; f) extra low voltage; g) barriers and wrappers; h) blockages and impediments; i) obstacles and bulkheads; j) Insulation of the living parts; k) double or reinforced insulation; l) out-of-reach placement; m) electrical separation. 4. Brazilian Technical Standards - NBR of ABNT: NBR-5410, NBR 14039 and others; 5. Ministry of Labor Regulations: <ol style="list-style-type: none"> a) NR's; b) NR-10 (Safety in installations and services with electricity); c) Qualification; license, empowerment and authorization. 6. Collective Protective Equipment; 7. Personal Protective Equipment. <p>Technical Reference: NR-10, Ministry of Labor and Employment regulations and complementary jurisprudence.</p>
Exam	Multiple choice exam with minimum passing grade of 60%.

Validity: 2 years