

Elbroc Set Clamp ; Coal Set Clamp

**ELBROC SET CLAMP / STUDDLE
EQUIPMENT / PART BASED RISK ASSESSMENT**

Component © Function (F)	Failure	Cause	Consequence	Risk Ranking - No Controls in Place			Manufacturers Controls	Recommended Controls by User	Risk Ranking Manufacturer / User Controls in Place		
				S	P	RR			S	P	RR
© – Round Clamp ; Coal Set Clamp (F) – To attach Set Clamp to an Elbroc XT 150 / Unique prop © – Square Beam Support Bracket (F) – To secure the RSJ's / Xbars	Clamp shear / lose grip – failure of set clamp Beam support bracket shear / fail – failure of set clamp	1.Poor welding 2.Plates to thin 3.Poor quality steel 4. Incorrect nuts	Set clamps can fail, could cause a fall of ground, resulting in a serious injury or fatal	2	3	41	1.Pre-set welding machines and check by foreman. (IQCP) 2.Trained and experienced welders employed. 3.Quality check all steel. (IQCP) 4. Clamps stored correctly. 5.Supplier of steel to supply chemical analysis certificate. (ISCOR)	1.Inspect Set Clamps for all parts and physical condition before installation. 2.Monitor Set Clamps visually during installation. 3.Re-place damaged Set Clamps.	5	4	19
© – Studdle (F) – To secure the support units	Clamping bracket shear / fail – failure of set	1.Poor welding 2.Plates to thin 3.Poor quality steel 4. Incorrect nuts	Set clamps can fail, could cause a fall of ground, resulting in a serious injury or fatal	2	3	41	1.Pre-set welding machines and check by foreman. (IQCP) 2.Trained and experienced welders employed. 3.Quality check all steel. (IQCP) 4.Steel plates / brackets stored correctly. 5.Supplier of steel to supply chemical analysis certificate. (ISCOR)	1.Inspect Studdle for all parts and physical condition before installation. 2.Monitor Studdles visually during installation. 3.Re-place damaged Studdles.	5	5	14

ELBROC SET CLAMP / STUDDLE TASK BASED RISK ASSESSMENT

				Risk Ranking - No Controls in Place			Manufacturers Controls	Recommended Controls by User	Risk Ranking Manufacturer / User Controls in Place		
Task	Hazard / Functional Failure	Cause of Failure	Failure effect or consequences	S	P	RR			S	P	RR
Making safe and preparing working place for installation.	<p>1. Not installing temporary support as per mine standard.</p> <p>2. Not barring the working place until safe to work in.</p> <p>3. XT 150 / Unique Prop cannot be pre-stressed properly.</p>	<p>1. Non-adherence to mine standards and making safe procedures.</p> <p>2. Footwall not cleaned properly.</p> <p>3. Hangingwall not barred to solid.</p>	Failure to making safe and preparation of working place could lead to fall of ground resulting in a serious injury or fatal.	2	3	41	1. Training of ELBROC trainers in mine's support standards and procedures.	<p>1. Compiling of mine standards and procedures regarding making safe and work place preparation.</p> <p>2. Training of crews in making safe and work place preparation.</p> <p>3. Planned task observations.</p> <p>4. Replace damaged Set Clamps / brackets / studdles</p>	5	4	19

ELBROC SET CLAMP / STUDDLE TASK BASED RISK ASSESSMENT

				Risk Ranking - No Controls in Place			Manufacturers Controls	Recommended Controls by User	Risk Ranking Manufacturer / User Controls in Place		
Task	Hazard / Functional Failure	Cause of Failure	Failure effect or consequences	S	P	RR			S	P	RR
Loading of material car. Storing of units.	Clamps could not be tightened properly.	Bolts / Nuts damaged or lost. Round clamp damaged / bend.	Set Clamps can fail, could cause a fall of ground, resulting in a serious injury or fatal	2	3	41	Nuts welded onto clamp and bracket.	1. Loading procedure to be compiled. 2. Proper storage of units in demarcated areas. 3. Replace damaged set clamps.	5	5	14
Manual transport		Clamp fall on a workers body part.	Manual transport can cause worker to drop set clamp causing injuries.	2	3	41		Wear protective clothing at all times as per mines standards and procedures.	5	5	14

**ELBROC SET CLAMP / STUDDLE
TASK BASED RISK ASSESSMENT**

				Risk Ranking - No Controls in Place			Manufacturers Controls	Recommended Controls by User	Risk Ranking Manufacturer / User Controls in Place		
Task	Hazard / Functional Failure	Cause of Failure	Failure effect or consequences	S	P	RR			S	P	RR
Placement of set clamps / studdle and positioning of installer during installation of unit.	1. Installer not positioned at a safe place during installation.	1.Inadequate training. 2. Incorrect positioning of installer whilst attaching the clamp studdle	The clamp / RSJ / studdle may fall during the installation of the clamp and sets resulting in serious injuries or fatal.	2	3	41	1.Training of ELBROC trainers in mine's support standards and procedures. 2. Training of ELBROC trainers in correct methods of positioning whilst attaching clamps and building sets.	1.Compiling of mine standards and procedures regarding set support. 2. Training of crews in the mines support standards and procedures regarding the building of sets. 3. Planned task observations.	5	4	19