

Согласовано:

Утверждаю:

**PERSONNEL TRAINING PROGRAM FOR MAINTENANCE AND REPAIR OF
TOP DRIVE SYSTEMS**

Course №4 (Special hydraulics course)

№.	Topic	Duration	Remarks
	1.	2.	3.
1.	Physical basics of hydraulics	1 hrs	
1.1	Hydraulic fluids		
1.2	Concept of pressure, Pascal's Law		
1.3	Power Conversion (Energy Conservation)		
1.4	The concept of flow		
2.	Hydropower plants	3 hrs	
2.1	Reservoir (hydraulic tank)		
2.2	Pumps		
2.3	Hydraulic accumulators		
2.4	Temperature Control (Cooling Systems)		
2.5	Linear control valves (hydraulic valves)		
2.6	Flow regulator valves (Choke valves)		
2.7	Pressure regulator valves		
2.8	Load holder valves (counterbalance valve)		
2.9	Logic control valves		
2.10	Check valves		
2.11	Actuators		
2.12	Breathing valves		
2.13	General principles for constructing hydraulic installations		
3.	Troubleshooting	4 hrs	
4.	Top Drive Hydraulic System Setup		
4.1	TD500-HT Hydraulic Diagram Symbols		
4.2	Reading TD500-HT hydraulic diagrams		
5.	Answers on questions		