

(三) 索马里兰国际石化技术技能人才联合培养项目

表 17. 索马里兰国际石化技术技能人才联合培养项目

沟通交流



项目合同

CONTRACT FOR JOINT TRAINING PROJECT OF
INTERNATIONAL PETROCHEMICAL TECHNICAL TALENTS

国际石化技术技能人才联合培养项目

合 同 书

Party A: Singapore New Silk Road Energy Co., Ltd. (abbreviated as "SNSEC")

甲方：新加坡新丝路能源有限公司（简称“SNSEC”）

Party B: Lanzhou Petrochemical Polytechnic (abbreviated as "LZPP")

乙方：兰州石化职业技术学院（简称“LZPP”）

二零一九年七月

**CONTRACT FOR JOINT TRAINING PROJECT OF
INTERNATIONAL PETROCHEMICAL TECHNICAL TALENTS**

**国际石化技术技能人才联合培养项目
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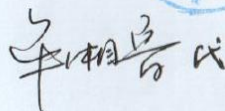
乙方：兰州石化职业技术学院（简称“LZPP”）

In response to the needs of production and operation technicians of the 5 million tons/year refining project (abbreviated as the "Project") in Somaliland (1.5 million tons/year refining plant) invested by SNSEC, SNSEC seeks partner colleges in China, expecting the cooperation of schools and enterprises in the joint training project of international petrochemical technical talents. Through investigation and field investigation, SNSEC has been deeply impressed by LZPP's teaching mode for applied petrochemical technical talents of combining theory with practice, productive training, pilot plant training and simulation training system, etc. SNSEC speaks highly of LZPP's domestic leading advantages in training applied Petrochemical Technology talents, is willing to cooperate with LZPP in the joint training project of

Party A: SINGAPORE NEW SILK ROAD ENERGY Co., Ltd (Seal)

甲方：新加坡新丝路能源有限公司 (SNSEC) (盖章)

Legal person signature 法人签字：



Contact person 联系人：

Telephone 电话：18917139947

Date 日期：2019年7月19日

Party B: LANZHOU PETROCHEMICAL POLYTECHNIC (Seal)

乙方：兰州石化职业技术学院 (LZPP) (盖章)

Legal person signature 法人签字：



Contact person 联系人：

Telephone 电话：

Date 日期：2019.7.19

人才培养方案课程体系

索马里兰工业分析技术专业人才培养方案课程体系															
Industrial analysis technology professional personnel training program curriculum system															
年級Grade:2019		专业：工业分析技术Industrial analysis technology				培养层次:专科college degree									
序号 Serial number	课程类别 CourseCategory	课程名称 Course Title	学分 Credits	学时 Hours	学时构成 School Time Composition			周学时分布 Weekly Time Distribution				考核方式 evaluation mode (考查Investigation 考试 Examination)			
					讲授 Lecturing	实训 Training	上机 Computer Training	First year		Second year					
								1 First semester (21)	2 Second semester (13)	1 First semester (13)	2 Second semester (9)				
1	职业素质类课程 Vocational quality courses	实用汉语听说Practical Chinese Reading, Speaking and Writing	13	224	224				4	4	4	4	考查Investigation		
2		公共英语Public Safety	6	84	84								考查Investigation		
3		体育与健康1Physical Education and Health 1&2	7	5	112	52	112	2	2	2	2	2	考查Investigation		
4		素质训练Quality training	2	60	60				2周				考查Investigation		
5		数学应用与实践Application and practice of Mathematics	5	63	63				3				考试Examination		
6		计算机操作技术Computer operation technology	4	52	63				52	3	4		考查Investigation		
7		物理Physics	5	63	63								考试Examination		
8		基础化学Basic chemistry	5	63	63								考试Examination		
小计					47.5	721	497	172	52	19	10	6	6		
9	专业知识类课程 Professional Knowledge Courses	无机化学Inorganic Chemistry	4	52	52					4				考试Examination	
10		有机化学Organic Chemistry	6	78	78					6				考试Examination	
11		物理化学Physical Chemistry	4	52	52					4				考试Examination	
12		化学分析Chemical Analysis	6	78	78					6				考试Examination	
13		光谱分析Spectral Analysis	4	52	52						4			考试Examination	
14		电化学分析Electrochemical Analysis	4	52	52						4			考试Examination	
15		色谱分析Chromatographic Analysis	6	78	78						6			考试Examination	
16		工业分析Industrial Analysis	4	54	54							6		考试Examination	
17	专业知识类课程 小计二	6	78	78							6		考试Examination		
18	职业能力类课程 Career Development Courses	化工单元操作技术Chemical unit operation technology	44	574	574						20	20	6	考试Examination	
19		炼油工艺基础Basic of Refining Process	4	52	52							4		考试Examination	
20		工业废水处理技术Industrial Wastewater Treatment Technology	5	54	54								6	考试Examination	
21		身边的化学品Side chemistry	6	84	84							4		考查	
22		危险化学品基础知识Basic knowledge of hazardous chemicals	6	84	84							4		考查	
23		工业分析专业英语Professional English for Industrial	4	54	54								6	考查	
24		电子电工技术Electrical and Electronic Technology	5	63	63							3		考查Investigation	
小计二					34	445	445				11		4	18	
专业理论课程小计 The small amount of Professional theory course					78	1019	1019				30	30	30	30	
25	职业能力类课程 Post Competency Courses	无机化学实验技术Inorganic Chemistry Experimental Technique	4	60	60						2周			考试Examination	
26		有机化学实验技术Organic Chemistry Experimental Technique	4	60	60						2周			考试Examination	
27		物理化学实验技术Physical Chemistry Experimental Technique	4	60	60						2周			考试Examination	
28		化工单元仿真模拟Chemical Unit Simulation Training	4	60	60							2周		考试Examination	
29		化学分析实训Chemical Analysis and Training	8	120	120							4周		考试Examination	
30		光谱分析实训Spectral Analysis and Training	4	60	60								2周	考试Examination	
31		电化学分析实训Electrochemical Analysis and Training	2	30	30								1周	考试Examination	
32		色谱分析实训Chromatographic Analysis and Training	4	60	60								2周	考试Examination	
33		油品分析实训Oil Analysis and Training	6	90	90								3周	考试Examination	
34		工业分析实训Industrial Analysis and Training	6	90	90									3周	考试Examination
35		现代仪器分析实训Modern Instrumental Analysis and Training	4	60	60									2周	考试Examination
36		大型分析仪器仿真实训Large Analytical Instrument Simulation Training	4	60	60									2周	考试Examination
37		原油蒸馏装置实训Crude Oil Distillation Unit Training	4	60	60									2周	考查
38		柴油加氢装置仿真实训Diesel Hydrogen Physical Simulation	2	30	30									1周	考查
39		岗位能力类课程	水环境监测实训Water Environment Monitoring Training	4	60	60								2周	考查Investigation
40		岗位能力类课程	水环境处理实训Water Treatment Technology Training	4	60	60								2周	考查Investigation
专业实训课程小计					68	1020	1020								
总计 Total					193.5	2760	1516	1192	52			36周Thirty-six weeks	36周Thirty-six weeks		
总学时数 (Total Hours): 2760 专业实践与理论课程比例 (Proportion of practice and theory curriculum): 1019: 1020=1: 1															
修订人: 郑晓明 审核人: 李薇															

附件2

索马里石油炼制技术专业人才培养方案课程体系 Curriculum system of petroleum refining technology professional personnel training program

学级 Grade: 2019		专业 Major: 石油炼制技术 Petroleum Refining Technology	培养层次 Culture Level: 专科 College Degree											
序号 Serial number	课程类别 Course Category	课程名称 Course Title	学分 Credit	学时 Hours	学时构成 School Time Composition			周学时分布 Weekly Time Distribution				考核方式 Assessment methods 考查 Investigation 考试 Examination		
					讲授 Lecturing	实训 Training	上机 Computer Training	第一年 First year		第二年 Second year				
								1 (19)	2 (15)	3 (15)	4 (8)			
1	职业素养类课程	公共安全 Public Security	2.5	38	38			2					考查 Investigation	
2	职业素养类课程	基础化学 Basic Chemistry	3.5	57	57			3					考查 Investigation	
3	职业素养类课程	物理 Physics	3.5	57	57			3					考查 Investigation	
4	职业素养类课程	实用汉语读写 Practical Chinese Reading, Speaking and Writing	13	228	228			4	4	4	4		考试 Examination	
5	职业素养类课程	体育与健康 1 with Physical Education and Health 1&2	7.5	114		114		2	2	2	2		考试 Examination	
6	职业素养类课程	数学应用与练习 Application and Practice of Mathematics	4.5	76	76			4					考试 Examination	
7	职业素养类课程	电子电工技术 Electronic and Electric Technology	2.5	76	76			2					考查 Investigation	
8	职业素养类课程	素质训练 Quality Training	4	60			60						考查 Investigation	
9	职业素养类课程	计算机操作技术 Computer Operation Technology	4	60			60						考试 Examination	
		小计 - Subtotal1	45	706	532	114	60	22	10	6	6			
10	专业知识类课程	无机化学 Inorganic Chemistry	4	60	60			4					考试 Examination	
11	专业知识类课程	分析化学 Analytical Chemistry	4	60	60			4					考试 Examination	
12	专业知识类课程	有机化学 Organic Chemistry	7.5	120	120			4	4				考试 Examination	
13	专业知识类课程	物理化学 Physical Chemistry	4	60	60			4					考试 Examination	
14	专业知识类课程	化工单元过程及设备 1 with Chemical Unit Process and Equipment 1&2	7.5	120	120			4	4				考试 Examination	
15	专业知识类课程	化工制图 Chemical Drawing	4.5	76	76			76	4				考查 Investigation	
16	专业知识类课程	危险化学品基础知识 Hazardous Chemicals Basics	4.5	76	76								考查 Investigation	
17	专业知识类课程	石油及石化产品 Introduction to Oil & Product	5	90	90						6		考试 Examination	
18	专业知识类课程	工业仪表自动化 Industrial Instrumentation Automation	4	60	60						6		考试 Examination	
19	专业知识类课程	燃料油生产技术 Fuel Oil Production Technology	5	90	90						6		考试 Examination	
		小计 - Subtotal2	50	812	736			76	8	20	24			
20	职业能力类课程	炼化专业英语 Specialized English for Refining and Chemical Engineering	3	48	48							6	考查 Investigation	
21	职业能力类课程	化工软件及应用 Chemical software and Application	3	48	48			48				6	考查 Investigation	
22	职业能力类课程	石油炼制生产工艺 Petrochemical Production Technology	3	48	48							6	考查 Investigation	
23	职业能力类课程	管式加热炉原理及应用 Principle and applications of tubular heating furnace	3	48	48							6	考查 Investigation	
		小计 - Subtotal3	12	192	144			48			24			
24	岗位能力类课程	无机化学实验技术 Inorganic Chemistry Experimental Technique	4	60	60			60		2			考试 Examination	
25	岗位能力类课程	有机化学实验技术 Organic Chemistry Experimental Technique	4	60	60					2			考试 Examination	
26	岗位能力类课程	物理化学实验技术 Physical Chemistry Experimental Technique	4	60	60					2			考试 Examination	
27	岗位能力类课程	分析和实验技术 Analytical Chemistry Experimental Technique	4	60	60					2			考试 Examination	
28	岗位能力类课程	化工单元操作与模拟 Chemical Unit Operation Training	4	60	60						2		考试 Examination	
29	岗位能力类课程	化工单元仿真实践 Chemical Unit Simulation Training	4	60	60						2		考试 Examination	
30	岗位能力类课程	油品分析实训 Oil Analysis and Training	4	60	60						2		考试 Examination	
31	岗位能力类课程	HSE体系运行实训 HSE System Operation Training	4	60	60						2		考试 Examination	
32	岗位能力类课程	常压蒸馏装置仿真实训 Atmospheric and Vacuum Distillation Unit Simulation Training	4	60	60						2		考试 Examination	
33	岗位能力类课程	催化重整装置仿真实训 Catalytic Cracking (FCC) Simulation Training	4	60	60						2		考试 Examination	
34	岗位能力类课程	催化重整装置仿真实训 Catalytic Reforming Simulation Training	4	60	60						2		考试 Examination	
35	岗位能力类课程	柴油加氢装置仿真实训 Diesel Hydrogenation Device Simulation Training	4	60	60						2		考试 Examination	
36	岗位能力类课程	炼油工艺装置实训 Refining Process Equipment Training	4	60	60						2		考试 Examination	
37	岗位能力类课程	原油常压蒸馏装置实训 Crude Oil Distillation Unit Training	4	60	60						2		考试 Examination	
38	岗位能力类课程	柴油加氢装置实训 Diesel Hydrogenation Unit Training	4	60	60						2		考试 Examination	
39	岗位能力类课程	小型提升管催化裂化装置实训 Small Rise Catalytic Cracking Unit Training	4	60	60						2		考试 Examination	
40	岗位能力类课程	化工设备基础 Chemical Equipment Foundation	6	90	90						3		考试 Examination	
		小计 - Subtotal4	21	1050	1050						18			
		合计 Total	177	2700	1582	1164	184		35	周 weeks				
总学时数 (Total Hours) : 2760				实践与理论课程比例 (Proportion of practice and theory curriculum) : 1174: 850=1:38: 1										
修订人 Revisers: 顾林 Lin Xie, 孟石 Shi Meng, 杨兴楷 Xing Kai Yang				审核人 Reviewers: 李薇 Wei Li										