ZULS AD 2.1 机场地名代码和名称 Aerodrome location indicator and name

ZULS-拉萨/贡嘎 LHASA/Gonggar

ZULS AD 2.2 机场地理位置和管理资料 Aerodrome geographical and administrative data

1	机场基准点坐标及其在机场的位置 ARP coordinates and site at AD	N29° 17.8' E090° 54.7' Center of RWY
2	方向、距离 Direction and distance from city	206° GEO, 44km from Potala Palace
3	标高/参考气温 Elevation/Reference temperature	3570m/ 24° C (JUN)
4	机场标高位置/高程异常 AD ELEV PSN/ geoid undulation	-
5	磁差/年变率 MAG VAR/Annual change	1° W/ -
6	机场管理部门、地址、电话、传真、AFS、电子邮箱、网址 AD administration, address, telephone, telefax, AFS, E-mail, website	The Tibet Autonomous Regional Administration of CAAC Lhasa/Gonggar Airport, Lhasa 850050, The Tibet Autonomous Region, China TEL: 86-891-6216009 FAX: 86-891-6182110 AFS: ZULSYDYX
7	允许飞行种类 Types of traffic permitted(IFR/VFR)	IFR/VFR
8	机场性质/飞行区指标 Military or civil airport & Reference code	Civil/-
9	备注 Remarks	Nil

ZULS AD 2.3 工作时间 Operational hours

1	机场当局(机场开放时间) AD Administration (AD operational hours)	HS or O/R
2	海关和移民 Customs and immigration	HS or O/R
3	卫生健康部门 Health and sanitation	HS or O/R
4	航行情报服务讲解室 AIS Briefing Office	HS or O/R
5	空中交通服务报告室 ATS Reporting Office (ARO)	HS or O/R
6	气象讲解室 MET Briefing Office	HS or O/R
7	空中交通服务 ATS	HS or O/R
8	加油 Fuelling	HS or O/R
9	地勤服务 Handling	HS or O/R

10	保安 Security	HS or O/R
11	除冰 De-icing	Nil
12	备注 Remarks	Nil

ZULS AD 2.4 地勤服务和设施 Handling services and facilities

1	货物装卸设施 Cargo-handling facilities	Container lift truck (7 tonnes), baggage transporter, container tractor, fork (5 tonnes), tow tractor, container lift platform(14 tonnes), bulk pallet, collection paneling trailer
2	燃油 / 滑油牌号 Fuel/oil types	Nr.3 jet fuel --
3	加油设施 / 能力 Fuelling facilities/capacity	Refueling trucks: 20 litres/sec
4	除冰设施 De-icing facilities	De-icers, nebulizer
5	过站航空器机库 Hangar space for visiting aircraft	Nil
6	过站航空器的维修设施 Repair facilities for visiting aircraft	Line maintenance available for B757-200, B737-700, A330-200, A330-300, A340and A319.
7	备注 Remarks	Stepladders vehicle, ferry vehicle

ZULS AD 2.5 旅客设施 Passenger facilities

1	宾馆 Hotels	At AD and in the city
2	餐馆 Restaurants	At AD and in the city
3	交通工具 Transportation	Passenger's coaches, taxis
4	医疗设施 Medical facilities	First aid at AD, hospitals in the city
5	银行和邮局 Bank and Post Office	At AD
6	旅行社 Tourist Office	At AD TEL: 86-891-6810444 FAX: 86-891-6830911
7	备注 Remarks	Nil

ZULS AD 2.6 援救与消防服务 Rescue and fire fighting services

1	机场消防等级 AD category for fire fighting	CAT 8

2	援救设备 Rescue equipment	Fire fighting facilities: primary foam tender, rapid intervention vehicle, medium-load foam tender, dry-chemical tender, rescue truck, illumination truck, rescue command car, tool car; Rescue equipment: steel cable, sleeper, aircraft emergency hanging and wire cable.
3	搬移受损航空器的能力 Capability for removal of disabled aircraft	Nil
4	备注 Remarks	Nil

ZULS AD 2.7 可用季节 - 扫雪 Seasonal availability-clearing

1	扫雪设备类型 Types of clearing equipment	Snow plough
2	扫雪顺序 Clearance priorities	RWY, TWY, Apron
3	备注 Remarks	Clear snow manually.

ZULS AD 2.8 停机坪、滑行道及校正位置数据 Aprons, taxiways and check locations data

1	停机坪道面和强度 Apron surface and strength	Surface:	Cement concrete
		Strength:	PCN 71/R/B/W/T(Stands Nr.8-18) PCN 56/R/B/W/T(Stands Nr.1-7) PCN 40/R/B/W/T(east of Stands Nr.1)
2	滑行道宽度、道面和强度 Taxiway width, surface and strength	Width:	45m: A, A1; 30m: A2, A6; 27m: A4, A5; 23m: A3,A7.
		Surface:	Cement concrete
		Strength:	PCN 71/R/B/W/T (A1, A4, A5, A7) PCN 56/R/B/W/T (A) PCN 51/R/B/W/T (A3) PCN 29/R/A/W/T (A6) PCN 28/R/B/W/T (A2)
3	高度表校正点的位置及其标高 ACL location and elevation	Nil	
4	VOR/INS 校正点 VOR/INS checkpoints	Nil	
5	备注 Remarks	Nil	

ZULS AD 2.9 地面活动引导和管制系统与标识

Surface movement guidance and control system and markings

1	航空器机位号码标记牌、滑行道引导线、航空器目视停靠 / 停放位置引导系统的使用 Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands	Taxiing guidance signs at all intersections with TWY and RWY and at all holding positions. Guide lines at apron. Nose-in guidance at aircraft stands.	
2	跑道和滑行道标志及灯光 RWY and TWY marking and LGT	RWY markings	THR, RWY designation, TDZ, center circle, center line, edge line, aiming point marking
		RWY lights	Center line, edge line, THR, RWY end
		TWY markings	Center line, edge line, taxi holding positions
		TWY lights	Edge line(TWYs A1- A5), RWY guard lights(TWYs A1, A2, A3)
3	停止排灯 Stop bars	Nil	
4	备注 Remarks	Nil	

ZULS AD 2.10 机场障碍物 Aerodrome obstacles

Obstacles within a circle with a radius of 15km centered on RWY center					
序号 Serial Nr.	**障碍物类型 (* 代表有灯光) Obstacle type (*Lighted)**	**磁方位 BRG (MAG)(degree)**	**距离 DIST(m)**	**海拔高度 Elevation(m)**	**影响的飞行程序及起飞航径区 Flight procedure/take-off flight path area affected**
1	MT	008	6879	4470	
2	MT	027	10959	4757	
3	MT	033	10909	4857	
4	MT	038	13004	5295	
5	MT	041	10391	4528	
6	MT	145	10264	4828	
7	MT	188	6650	4428	
8	MT	212	7558	4428	
9	TWR	214	623	3595	
10	MT	220	5979	4228	
11	MT	294	9746	4418	
12	MT	315	7731	4428	
Remarks:					

Obstacles between two circles with the radius of 15km and 50km centered on RWY center					
序号 Serial Nr.	障碍物类型 (* 代表有灯光) Obstacle type (*Lighted)	磁方位 BRG (MAG)(degree)	距离 DIST(m)	海拔高度 Elevation(m)	影响的飞行程序及起飞航径区 Flight procedure/take-off flight path area affected
1	MT	001	48000	5508	
2	MT	012	48000	5533	
3	MT	032	21000	5100	
4	MT	044	39000	5569	
5	MT	048	25000	5968	
6	MT	061	46000	5857	
7	MT	068	28000	5151	
8	MT	078	31000	5390	
9	MT	088	16000	3740	
10	MT	090	16000	3815	
11	MT	120	18000	4420	
12	MT	145	41000	5435	
13	MT	149	15260	1558	
14	MT	157	18000	5100	
15	MT	164	24000	5387	
16	MT	185	25000	5306	
17	MT	192	24000	5100	
18	MT	202	28000	5320	
19	MT	248	27000	5512	
20	MT	254	35000	5374	
21	MT	292	42000	5843	
22	MT	308	31000	5500	
23	MT	319	22000	4800	
24	MT	333	38000	5758	
25	MT	339	34000	6312	
26	MT	345	20000	4600	
27	MT	347	33000	5682	
28	MT	359	33000	5277	
Remark: No significant obstacles in the take-off flight path area.					

ZULS AD 2.11 提供的气象信息、机场观测与报告

Meteorological information provided & aerodrome observations and reports

1	相关气象室的名称 Associated MET Office	MET Office of Tibet Autonomous Regional Administration of CAAC
2	气象服务时间、服务时间以外的责任气象室 Hours of service, MET Office outside hours	HO --
3	负责编发 TAF 的办公室 ; 有效期 Office responsible for TAF preparation,Periods of validity	MET Forecast Office of Tibet Autonomous Regional Administration of CAAC 9 HR, 24HR
4	着陆预报类型、发布间隔 Type of landing forecast, Interval of issuance	Trend 30 MIN
5	所提供的讲解 / 咨询服务 Briefing/consultation provided	P, T
6	飞行文件及其使用语言 Flight documentation, Languages used	Chart, International MET Codes, Abbreviated Plain Language Text Ch
7	讲解 / 咨询服务时可利用的图表和其它信息 Charts and other information available for briefing or consultation	Synoptic charts, significant weather charts, upper W/T Charts, satellite and radar material, AWOS Real-time Data
8	提供信息的辅助设备 Supplementary equipment available for providing information	FAX, MET Service Terminal, satellite cloud monitor, AW11 data monitor, MIDAS IV data, doppler radar
9	接收气象信息的空中交通服务单位 ATS units provided with information	TWR, ACC
10	观测类型与频率 / 自动观测设备 Type & frequency of observation/ Automatic observation equipment	Half hourly plus special observation/Yes
11	气象报告类型及所包含的补充资料 Type of MET Report & supplementary information included	METAR, SPECI, TEND
12	观测系统及位置 Observation System & Site(s)	MIDAS: RWY 09L: 110m N of RCL, 300m inward THR; RWY 27R: 110m N of RCL, 300m inward THR; RWY center: 110m N of RCL, 2000m inward THR 09L.
13	气象观测系统的工作时间 Hours of operation for meteorological observation system	HO
14	气候资料 Climatological information	Climatological tables AVBL
15	其他信息 Additional information	TEL: 86-891-6216772

ZULS AD 2.12 跑道物理特征 Runway physical characteristics

跑道号码 Designations RWY NR	真方位和磁方位 TRUE & MAG BRG	跑道长宽 Dimensions of RWY (m)	跑道强度 (PCN), 跑道道面 / 停止道道面 RWY strength (PCN), RWY surface/SWY surface	着陆入口坐标及高程异常 THR coordinates and geoid undulation	跑道着陆入口标高, 精密进近跑道接地地带最高标高 THR elevation and highest elevation of TDZ of precision APP RWY
1	2	3	4	5	6
09L	088° GEO 089° MAG	4000 × 45	74/F/B/W/T Asphalt/ Asphalt	Nil	THR 3569.7m --
27R	268° GEO 269° MAG	4000 × 45	74/F/B/W/T Asphalt/ Asphalt	Nil	THR 3567.5m --
跑道 - 停止道坡度 Slope of RWY-SWY	停止道长宽 SWY dimensions (m)	净空道长宽 CWY dimensions (m)	升降带长宽 Strip dimensions (m)	无障碍物地带 OFZ	跑道端安全区长宽 RWY end safety area dimensions (m)
7	8	9	10	11	12
FM 27R to 09L 0.0481% (2000)/ 0.0603% (2000)	Nil	Nil	4120 × 150	Nil	Nil
FM 27R to 09L 0.0481% (2000)/ 0.0603% (2000)	Nil	Nil	4120 × 150	Nil	Nil
Remarks:					

ZULS AD 2.13 公布距离 Declared distances

跑道代号 RWY Designator	可用起飞滑跑距离 TORA (m)	可用起飞距离 TODA (m)	可用加速停止距离 ASDA (m)	可用着陆距离 LDA (m)	备注 Remarks
09L	4000	4000	4000	4000	Nil
27R	4000	4000	4000	4000	Nil
Remarks:					

ZULS AD 2.14 进近和跑道灯光 Approach and runway lighting

跑道代号 RWY Designator	进近灯类型、长度、强度 APCH LGT type LEN INTST	入口灯颜色、翼排灯 THR LGT colour WBAR	目视进近坡度指示系统 (跑道入口最低眼高), 精密进近航道指示器 VASIS (MEHT) PAPI	接地地带灯长度 TDZ LGT LEN	跑道中心线灯长度、间隔、颜色、强度 RWY Center line LGT LEN, spacing, colour, INTST	跑道边灯长度、间隔、颜色、强度 RWY edge LGT LEN, spacing, colour, INTST	跑道末端灯颜色 RWY end LGT colour	停止道灯长度、颜色 SWY LGT LEN, colour
1	2	3	4	5	6	7	8	9
09L	SALS 420m LIH	Green --	PAPI Left/3°	Nil	4000m * spacing 30m	4000m ** spacing 60m	Red	Nil
27R	CAT I 720m LIH	Green --	PAPI Left/3°	Nil	4000m * spacing 30m	4000m ** spacing 60m	Red	Nil
Remarks: *0-3680m White VRB LIH, 3680-4000m Red VRB LIH **0-3400m White VRB LIH, 3400-4000m Yellow VRB LIH								

ZULS AD 2.15 其它灯光 , 备份电源 Other lighting, secondary power supply

1	机场灯标 / 识别灯标位置、特性和工作时间 ABN/IBN location, characteristics and hours of operation	Nil
2	着陆方向指示器位置和灯光 ; 风速表位置和灯光 LDI location and LGT, Anemometer location and LGT	See AD Chart
3	滑行道边灯和中心线灯光 TWY edge and center line lighting	Blue edge line lights available for TWY A1-A5.
4	备份电源 / 转换时间 Secondary power supply/switch-over time	Dual feed, diesel engine driven generator Switch-over time: 15 sec
5	备注 Remarks	Nil

ZULS AD 2.16 直升机着陆区域 Helicopter landing area

1	TLOF 坐标或 FATO 入口坐标及高程异常 Coordinates TLOF or THR of FATO Geoid undulation	Nil
2	TLOF 和 / 或 FATO 标高 (m) TLOF and/or FATO elevation (m)	Nil
3	TLOF 和 FATO 区域范围、道面、强度和标志 TLOF and FATO area dimensions,surface, strength, marking	Nil
4	FATO 的真方位和磁方位 True and MAG BRG of FATO	Nil
5	公布距离 Declared distance available	Nil
6	进近灯光和 FATO 灯光 APP and FATO lighting	Nil
7	备注 Remarks	Nil

ZULS AD 2.17 空中交通服务空域 ATS airspace

名称 Designation	横向界限 Lateral limits	垂直界限 Vertical limits	备注 Remarks
Lhasa tower control area	N303200E0902800- N293100E0901600- N283630E0901200 -N283900E0924600- N311230E0924600- N311700E0921400 -N305800E0911520- N303200E0902800	SFC-8100m MSL	
Altimeter setting region and TL/TA	A circle with a radius of 100km centered on Lhasa VOR/DME(LXA).	TL 8100m TA 7500m 7800m(QNH ⩾ 1031hPa) 7200m(QNH ⩽ 979hPa)	

ZULS AD 2.18 空中交通服务通信设施 ATS communication facilities

服务名称 Service Designation	呼号 Call sign	频率 Frequency (MHz)	工作时间 Hours of operation	备注 Remarks
1	2	3	4	5
TWR	Lhasa Tower	118.25 (124.3)	H24	
GND	Lhasa Ground	121.65 (124.3)	H24	

ZULS AD 2.19 无线电导航和着陆设施 Radio navigation and landing aids

设施名称和类型 Name and type of aid	识别 ID	频率 Frequency	发射天线位置、坐标 Antenna site coordinates	DME 发射天线标高 Elevation of DME transmitting antenna	备注 Remarks
1	2	3	4	5	6
Lhasa VOR/DME	LXA	113.1MHz CH 78X	N29° 17.8′ E090° 59.9′	3 570m	R168° - R220° for DME U/S, beyond 25NM on R022° for DME U/S, beyond 36NM on R022° for VOR U/S.
Zedang NDB	DM	435kHz	N29° 15.3′ E091° 45.9′ 094° MAG/ 80693m FM THR RWY27R		Coverage 200km
OM 27R		75MHz	090° MAG/ 15049m FM THR RWY 27R		U/S
LOC 27R ILS CAT I	ISS	110.3MHz	310m inward FM THR RWY 27R 115m N of RCL		Beyond -8° and beyond +12° of front course U/S.
GP 27R		335.0MHz	310m inward FM THR RWY 27R 115m N of RCL		Angle 3° , RDH 15m Beyond -6° for GP U/S.
DME 27R	ISS	CH 40X (110.3MHz)		3 575m	Co-located with GP27R
Remarks:					

ZULS AD 2.20 本场飞行规定

1. 机场使用规定

1.1 所有技术试飞需事先申请，并得到空中交通管制部门批准后方可进行。

1.2 禁止未安装二次雷达应答机的航空器起降，在特殊情况下，经西南局批准，可允许无二次应答机的航空器起降。

1.3本机场夜航基于RNP运行，不具备此条件的航空器只能在日出时刻后，日落时刻前起降（包括返航）。

ZULS AD 2.20 Local traffic regulations

1. Airport operations regulations

1.1 Each and every technical test flight shall be filed in advance and conducted only after clearance has been obtained from ATC.

1.2 Aircraft without SSR transponder is forbidden to take off or land here except specially authorized byCAAC Southwest Regional Administration.

1.3 Night flight is only available for RNP operation, otherwise, departure and landing shall be conducted after sunrise and before sunset(returning to base included).

2. 跑道和滑行道的使用

2.1 航空器必须使用全跑道起飞。

2.2 滑行道的使用原则：可以使用跑道滑行，具体滑行路线以塔台管制员指令为准。

2.3 可以通过塔台申请拖车服务。

2.4 离场飞行的航空器，在推出开车前必须申请管制放行许可。空中交通管制放行许可的申请不早于发动机开车前10min进行。

2. Use of runways and taxiways

2.1 The full RWY shall be used for take-off.

2.2 RWY can be used for taxiing. Aircraft shall follow ATC instructions to taxi.

2.3 Towing service is available via Tower Control.

2.4 Departing aircraft shall contact Aerodrome Ground Control for departure clearance not earlier than 10 minutes prior to push-out for engine start-up.

3. 机坪和机位的使用

3. Use of aprons and parking stands

3.1 机位使用限制 /Limits for aircraft parking on the following stands:

停机位 /Stands	航空器翼展限制 /Wing span limits for aircraft
Nr.18	⩽ 65m
Nr.8-17	⩽ 36m
Remark: Stand Nr.18 is combined with Stands Nr.8 and Nr.9, and when Nr.18 is in use, Nr.8 and Nr.9 can not be used.	

3.2 发动机试车，需经塔台管制许可，并在指定的地点进行。

3.2 Engine run-ups are subject to Tower Control clearance,and shall be carried out at a designated location.

4. 进、离场管制规定

4. Air traffic control regulations

无

Nil

5. 机场的 II/III 类运行

5. CAT II/III operations at AD

无

Nil

6. 除冰规则

6. Rules for deicing

无

Nil

7. 平行跑道同时仪表运行

7. Simultaneous operations on parallel runways

无

Nil

9. 直升机飞行限制，直升机停靠区

9. Helicopter operation restrictions and helicopter parking/docking area

直升机进、出停机位必须由引导车引导。

Helicopters shall be guided by follow-me vehicle to entering /exiting the parking stands.

ZULS AD 2.21 噪音限制规定及减噪程序

ZULS AD 2.21 Noise restrictions and Noise abatement procedures

无

Nil

ZULS AD 2.22 飞行程序

ZULS AD 2.22 Flight procedures

1. 总则

1. General

1.1除使用09L跑道进近、27R跑道离场或经拉萨塔台特殊许可外，在拉萨塔台管制区内的飞行，必须按照仪表飞行规则进行。

1.1 Flights within Lhasa Tower Control Area shall operate under IFR unless conducting RWY 09L Arrival/Approach and RWY 27R Visual Departure or special clearance has been obtained from Lhasa Tower Control.

1.2本场09L跑道目视进近程序和27R跑道目视离场程序均为特殊程序，仅供获得资格的航空公司和飞行员使用。

1.2 RWY 09L Visual Arrival/Approach Flight Procedure and RWY27R Visual Departure Flight Procedure can only be applied by qualified airlines and pilot.

1.2.1航空公司只有满足下列条件，方可使用这两个目视程序：

1.2.1The requirements for Aircraft operator:

a. 公司为实施这两个目视程序制定了标准操作程序、检查程序，包括失去目视后的处置程序；

a. Standard operation procedures and checking list, including the procedures for loss of visual reference shall be established;

b. 为配合这两个目视程序的使用，公司制定了相应的起飞一发失效应急程序;

c.公司对拉萨机场09L跑道目视进近程序和27R跑道目视离场程序进行了实际的验证试飞。

1.2.2 飞行员只有满足下列条件方可使用这两个目视程序:

a. 飞行员对公司制定的有关程序进行了认真的学习和研究，已经熟悉了拉萨机场周围的地形;

b. 飞行员在模拟机上机进行了这两个目视程序训练，或在拉萨机场已进行过类似程序的实际飞行或跟班飞行;

c. 飞行员在模拟机上已进行了拉萨机场一发失效应急程序的飞行训练，或在拉萨机场进行了模拟一发失效应急程序的实际飞行或跟班飞行。

1.3 严禁航空器在泽当 NDB “DM” 以西有相对起降飞行。

b. Emergency procedures for one engine out shall be established;

c. Test flight of the above two visual flight procedures shall be conducted.

1.2.2 The requirements for pilot

a.Familiar with the visual flight procedure and the surrounding tarrain of the airport;

b. Simulator training or actual flight training concerning the two visual flight procedures shall be conducted;

c. Simulator training or actual flight training concerning the emergency procedure for one engine out shall be conducted.

1.3 Relative take-off and landing is forbidden west of Zedang NDB'DM'.

2. 起落航线

无

2. Traffic circuits

Nil

3. 仪表飞行程序

严格按照航图中公布的进、离场程序飞行。如果需要，航空器可在空中交通管制部门指定的航路、导航台或定位点上空等待或做机动飞行。

3. IFR flight procedures

Strict adherence is required to the relevant arrival/departure procedures published in the aeronautical charts. Aircraft may, if necessary, hold or maneuver on an airway, over a navigation facility or a fix designated by ATC.

4. 雷达程序和 / 或 ADS-B 程序

无

4. Radar procedures and/or ADS-B procedures

Nil

5. 无线电通信失效程序

无

5. Radio communication failure procedures

Nil

6. 目视飞行程序

见AD2.24

6. Procedures for VFR flights

See AD2.24

7. 目视飞行航线

无

7. VFR route

Nil

8. 目视参考点

无

8. Visual reference point

Nil

9. 其它规定

无

9. Other regulations

Nil

10. 区域导航飞行程序相关数据

无

10. Data for RNAV flight procedures

Nil

ZULS AD 2.23 其它资料

1. 全年有鸟类活动，机场当局采取了驱赶措施，以减少鸟群活动。鸟的活动情况如下:

ZULS AD 2.23 Other information

1. Activities of bird flocks are found all the year round,Aerodrome Authority resorts to dispersal methods to reduce bird activities.Details of bird activities as follows:

Migratory Season	Characteristic of bird blocks			
	Weight of bird	Length of bird	Flight height	Numbers per day

Winter: Oct.-Apr.; 00:00-01:00 and 03:00-04:30 daily, shuttle through aerodrome flight area	2.5kg	61cm		over 1500 birds with groups of 20-50 birds
	3.0kg	70cm		over 500 birds with groups of 20-50 birds
	6.0kg	120cm		over 10 birds per day
Summer: Apr.-Nov.; 00:00-01:00 and 03:00-04:30 daily, shuttle through aerodrome flight area (S to N or N to S)	0.21-0.263kg	33cm	0-100m	over 2000 birds per day, in pairs
	0.08kg	28cm	0-50m	

2. 机场设置了一个激光驱鸟器，发出绿色激光驱赶鸟类。设备开放时间为
夏季：22：00-00：00(次日),13：00-16：00(UTC)；冬季：22：30-00：30（次日）, 12：30-15：30(UTC)。

2. Laser equipment installed, transmitting green light to ground when operating.
Operation time:
22:00-00:00(next day), 13:00-16:00(UTC) daily in the summer;
22:30-00:30(next day), 12:30-15:30 (UTC) daily in the winter.