

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

ZSJN-济南/遥墙 JINAN/Yaoqiang

ZSJN 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	N36° 51.5' E117° 12.9' Center of RWY
2	方向、距离 Direction and distance from city	039° GEO, 28.5km from city center
3	标高 / 参考气温 Elevation/Reference temperature	23.1m/ 31.8° C(JUL)
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	6° 19'W/ -0° 5'22"
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	Jinan International Airport CO. LTD. Jinan Yaoqiang Airport, Jinan 250107, Shandong province, China TEL: 86-531-82086166/82086266 FAX: 86-531-82086111 E-mail: Jinanaoc@163.com, AFS: ZSJNYDYX
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/4E
9	备注 Remarks	Nil

ZSJN 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	HS or O/R
12	备注 Remarks	Nil

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

1	货物装卸设施 Cargo-handling facilities	Platform lift(15 tonnes, 7 tonnes), conveyor belt truck, tow-tractor
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 truck(35000 / 47000 liters) , hydrant dispenser: 17 liters/ sec, apron refueling well
4	除冰设施 De-icing facilities	8 aircraft de-icers
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 aircraft on request. Other maintenance work by prior arrangement.
7	备注 Remarks	Airport passenger buses and passenger boarding stairs

ZSJN AD 2.5 旅客设施 Passenger facilities

1	宾馆 Hotels	At AD
2	餐馆 Restaurants	At AD
3	交通工具 Transportation	Passenger's coaches , taxis
4	医疗设施 Medical facilities	First-aid and 2 ambulances at AD
5	银行和邮局 Bank and Post Office	At AD (0100-0800 UTC)
6	旅行社 Tourist Office	In the city TEL: 86-531-6011908
7	备注 Remarks	Nil

ZSJN 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: Fire tenders, ambulance, foam tender Rescue equipment: temporary rescue roadways for aircraft recovery, aircraft recovery towing couplings(for B737-500, B737-800, B757, B767, A300, A319, A320)
3	搬移受损航空器的能力 Capability for removal of disabled aircraft	MTWA up to B737 or A320
4	备注 Remarks	Emergency traction rope, emergency tow-tractor, towing movement surface, lifting equipment(90t,150t), hoisting gasbag(30t,40t), platform vehicle, etc.

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

1	扫雪设备类型 Types of clearing equipment	All seasons snow blower, snow board, snow ploughs, snow fluid truck,snow removal vehicles
2	扫雪顺序 Clearance priorities	RWY, TWY, apron
3	备注 Remarks	Nil

ZSJN 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 80/R/C/W/T (Apron Nr.2(stands Nr.1-13)) PCN 79/R/C/W/T (Apron Nr.2(except stands Nr.1-13)) PCN 54/R/B/W/T (Apron Nr.3)
2	滑行道宽度、道面和强度 Taxiway width, surface and strength	Width:	23m: main TWY A, B, E(west of main TWY A), H, J, M, T4; 28.5m: A, C, D, E(east of main TWY A), F, G; 34m: L.
		Surface:	Cement concrete
		Strength:	PCN 82/R/B/W/T T4 PCN 81/R/C/W/T Main TWY A(north of C) PCN 80/R/B/W/T Main TWY A(north) PCN 80/R/C/W/T Main TWY A(south of C,south),H PCN 79/R/B/W/T TWY B,J,L PCN 54/R/B/W/T TWY E PCN 53/R/B/W/T TWY C,D,F PCN 53/R/C/W/T TWY G,M
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	

ZSJN 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 of TWY and RWY and at all holding positions. Guide lines at all TWYs and aprons. Identification sign boards for all 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 line, center circle, edge line, aiming point
		RWY lights	Center line, edge line, THR, wing bar, RWY end
		TWY markings	Center line, edge line, taxi holding positions, taxiway edge retro-reflective marker, 'No-entry' taxiway(C、D、F、G)
		TWY lights	Edge line, taxiway edge retro-reflective marker, center line(except TWY H, J, T4), RWY guard lights, intermediate holding position, 'No-entry' bar, rapid exit TWY indicator lights
3	停止排灯 Stop bars	Nil	
4	备注 Remarks	Blue apron edge line lights	

ZSJN 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	TWR	000	13277	105.3	
2	TWR	001	12176	126	RWY19 ILS/DME, PBN, VOR/ DME Intermediate approach RWY01 departure
3	Light	006	2783	38.1	RWY01 Take-off flight path
4	*Antenna	006	2785	35	RWY01 Take-off flight path
5	*Antenna	011	1502	38.6	
6	Chimney	017	5666	67.0	RWY19 GP INOP, VOR/DME final approach
7	TWR	034	2679	67.3	
8	MT	177	13719	101.5	
9	Antenna	182	1499	39	
10	Power line	184	9114	65.7	
11	* Antenna	186	3000	43	RWY19 Departure RWY19 Take-off flight path
12	Light	186	3020	42.6	RWY19 Take-off flight path
13	Power line	187	9219	66.2	RWY01 GP INOP,VOR/DME final approach
14	power line	189	9304	60.2	
15	TWR	191	6017	70.0	RWY01 GP INOP, VOR/DME final approach
16	BLDG	191	14196	86.0	
17	Chimney	197	14090	167.9	
18	Chimney	203	14692	190.4	
19	*Chimney	209	6292	102.9	CAT B Circling
20	TWR	220	5149	67.1	
21	*TWR	252	7574	228.9	CAT C/D Circling
22	*Control TWR	261	783	95.6	CAT A Circling
23	*BLDG	289	839	71.4	
24	Power line	333	7071	110.1	
25	*Power line	338	6519	121.8	
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	TWR	001	51204	133	
2	TWR	029	26514	140	
3	TWR	031	25630	155	

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
4	TWR	033	24888	114	
5	MT	096	39452	592	MSA sector
6	MT	100	32812	393	
7	MT	103	35696	699	
8	TWR	105	24686	175	
9	BLDG	106	39272	827	
10	Chimney	130	30740	246	
11	MT	133	36143	374	
12	MT	135	39633	694	
13	MT	135	97865	1108	Minimum surveillance altitude sector Nr.6
14	MT	136	48574	762	
15	MT	139	49630	834	
16	MT	167	38124	796	RWY01 PBN initial approach
17	BLDG	170	39624	853	Minimum surveillance altitude sector Nr.4
18	Contour	176	25944	380	Minimum surveillance altitude sector Nr.2
19	MT	177	37962	746	
20	MT	177	44093	858	
21	MT	179	19550	254	Minimum surveillance altitude sector Nr.1 RWY01 traditional, PBN intermediate approach
22	MT	179	33897	757	RWY01 PBN, ILS/DME, VOR/ DME initial approach
23	MT	179	42558	857	
24	MT	181	26481	498	
25	MT	185	28613	527	RWY01 PBN, traditional initial approach
26	MT	185	49326	976	MSA sector, Minimum surveillance altitude sector Nr.5 RWY01 PBN initial approach RWY01/19 traditional arrival
27	TWR	195	22585	370	RWY01 traditional, PBN initial approach

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
28	MT	195	67272	1545	Minimum surveillance altitude sector Nr.7 RWY01 PBN arrival RWY01 traditional arrival holding RWY19 traditional, PBN departure
29	MT	196	17671	174	
30	MT	197	41763	567	
31	MT	198	44451	626	
32	BLDG	199	15741	133	
33	MT	199	35873	755	RWY01 PBN initial approach
34	Contour	201	30755	580	Minimum surveillance altitude sector Nr.3
35	BLDG	203	22901	482	RWY01 holding
36	MT	230	19745	197	
Remark:					

ZSJN 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	Shandong ATMB MET Office 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	H24
3	负责编发 TAF 的办公室;有效期 Office responsible for TAF preparation, Periods of validity	Shandong ATMB MET Office of CAAC 9 HR, 24 HR
4	着陆预报类型、发布间隔 Type of landing forecast, Interval of issuance	Trend 1 HR
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, En
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, internet
9	接收气象信息的空中交通服务单位 ATS units provided with information	TWR, APP, ACC, ARO
10	观测类型与频率 / 自动观测设备 Type & frequency of observation/ Automatic observation equipment	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)	SFC wind sensors: RWY 01: 110m E of RCL, 319m inward THR01; RWY center: 110m E of RCL, 1800m inward THR19; RWY 19: 110m E of RCL, 316m inward THR19. RVR EQPT: A: 100m E of RCL, 309m inward THR01; B: 100m E of RCL, 1800m inward THR19; C: 100m E of RCL, 336m inward THR19. Ceilometer: RWY 01: 110m S of RCL, 309m inward THR01; RWY 19: 110m S of RCL, 306m inward THR19.
13	气象观测系统的工作时间 Hours of operation for meteorological observation system	H24
14	气候资料 Climatological information	Climatological tables AVBL
15	其他信息 Additional information	Nil

ZSJN 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
01	360° GEO 006° MAG	3600 × 45	77R/C/W/T Cement concrete	Nil	THR 23.1m --
19	180° GEO 186° MAG	3600 × 45	77R/C/W/T Cement concrete	Nil	THR 22.4m --
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
See AOC	Nil	Nil	3720 × 300	Nil	210 × 150m
See AOC	Nil	Nil	3720 × 300	Nil	210 × 150m
Remarks:					

ZSJN 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
01	3600	3600	3600	3600	Nil
19	3600	3600	3600	3600	Nil
Remarks:					

ZSJN 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
01	CAT I* 900m LIH	Green Yes	PAPI Left/3°	Nil	3600m** spacing 30m	3600m*** spacing 60m	Red	Nil
19	CAT I* 900m LIH	Green Yes	PAPI Left/3°	Nil	3600m** spacing 30m	3600m*** spacing 60m	Red	Nil
Remarks: * SFL **0-2700m White VRB LIH, 2700-3300m Red/White VRB LIH, 3300m-3600m Red VRB LIH ***up to 3000m White VRB LIH, 3000-3600m Yellow VRB LIH								

ZSJN 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	WDI: 01: 59.4m E of RCL, 590m inward THR01; 19: 59m E of RCL, 590m inward THR19.
3	滑行道边灯和中心线灯光 TWY edge and center line lighting	TWY edge line lights available for all TWYs; TWY edge retroreflective markings; Intermediate holding position
4	备份电源 / 转换时间 Secondary power supply/switch-over time	Standby power supply available/ < 15 sec
5	备注 Remarks	Nil

ZSJN 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

ZSJN 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
Jinan tower control area	A circuit, 2 arcs with radius 15km centered at ARP and 2 parallel lines of 10km from RCL.	GND-600m	
Fuel Dumping Area	N37 18.0E117 10.0-N37 24.5E117 30.0-N37 02.5E117 30.0-N37 00.0E117 15.0-N37 18.0E117 10.0	Above 4000m	
Altimeter setting region and TL/TA	A circle with a radius of 55km centered on Jinan VOR/DME.	TL 3600m TA 3000m 3300m(QNH ≥ 1031hPa) 2700m(QNH ≤ 979hPa)	

ZSJN 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
ATIS		127.05	HO	Nil
APP	Jinan Approach	119.05 (121.4) AP01	H24	Nil
APP	Jinan Approach	119.225 (121.4) AP02	2300-1500(next day)	Contact ZSJNAP01 when ZSJNAP02 U/S.
TWR	Jinan Tower	118.55(123.6)	H24	
GND	Jinan Ground	121.85	2359-1200	Nil
Delivery	Jinan Delivery	121.65(123.6)	00:00-12:00 UTC	DCL available
APN	Jinan Apron	129.675	H24	
OP-CTL		131.5	HO	
EMG		121.5	H24	

ZSJN 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
Jinan VOR/DME	YQG	113.7MHz CH 84X	N36° 50.0' E117° 12.9'	31m	
Dangjiazhuang NDB	DP	226kHz	N36° 46.4' E117° 22.2'		Beyond 10NM on bearing 005° , beyond 12NM on bearing 025° , beyond 15NM on bearing 055° and BTN 22-26NM on bearing 189° U/S.
LOC 01 ILS CAT I	IFF	108.9MHz	006° MAG/ 280m FM end RWY 01		Beyond 13NM rightside of front, below 1200m U/S
GP 01		329.3MHz	120m E of RCL, 306m FM THR 01		Angle 3° RDH 15m
DME 01	IFF	CH 26X (108.9MHz)	123m E of RCL, 306m FM THR 01	28m	Co-located with GP
LOC 19 ILS CAT I	IGO	110.5MHz	186° MAG/ 280m FM end RWY 19		
GP 19		329.6MHz	120m E of RCL, 303m FM THR 19		Angle 3° RDH 15m
DME 19	IGO	CH 42X (110.5MHz)	123m E of RCL, 303m FM THR 19	28m	Co-located with GP
Remark: Nil					

ZSJN AD 2.20 本场飞行规定**ZSJN AD 2.20 Local traffic regulations****1. 机场使用规定**

1.1 禁止未安装二次雷达应答机的航空器起降;

1.2 所有技术试飞需事先申请, 并在得到空中交通管制部门批准后方可进行。

1.3 可使用最大机型: B747-400及同类机型。

1.4 如需 DCL 服务, 机组应在预计起飞前 20min 内提出申请。

1.5 本场 T4 滑行道及以西的 2 号停机坪 (1-8 号停机位) 实施机坪运行管理。

1. Airport operations regulations

1.1 Takeoff/landing of aircraft without SSR transponder are forbidden;

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

1.3 Maximum aircraft to be available: B747-400 and equivalent.

1.4 Pilot can request DCL 20 minutes in prior before ETD.

1.5 Apron operations are used for TWY T4 and Nr.2 apron (Nr.1-8 parking stands) .

1.5.1 离港航空器推出、开车、滑行三阶段的具体工作程序:

1.5.1.1 航空器获得塔台发布的放行许可后, 联系济南机坪。

1.5.1.2 济南机坪负责发布航空器推出、开车及滑行指令。

1.5.1.3 济南机坪在移交点前指挥航空器联系塔台。

1.5.2 进港航空器滑行工作程序:

1.5.2.1 航空器跟随引导车滑行。

1.5.2.2 塔台在移交点前指挥航空器联系济南机坪。

1.5.1 The specific operation rules of departure aircraft push-back, start-up and taxiing as follow:

1.5.1.1 Aircraft shall contact with APN after obtaining delivery clearance.

1.5.1.2 Aircraft push-back, start-up and taxiing shall follow the instructions of APN.

1.5.1.3 APN shall instruct aircraft to contact with TWR before transfer point.

1.5.2 Taxiing procedure of arrival aircraft as follow:

1.5.2.1 Aircraft shall taxi by following follow-me.

1.5.2.2 TWR instruct aircraft to contact with APN before transfer point.

2. 跑道和滑行道的使用

2.1 进港航空器在本场滑行, 须由引导车引导;

2. Use of runways and taxiways

2.1 Landing aircraft shall be guided by follow-me vehicle;

2.2 滑行规定 /Taxiing rules:

RWY	Departure(Stand → RWY)	Arrival(RWY → Stand)
RWY01	stands Nr.1-7 → TWY H → RWY01; stands Nr.8 → TWY T4 → TWY J → RWY01; stands Nr.9-13 → TWY J → RWY01	RWY01 → TWY L → TWY T1 → TWY T4 → stands Nr.1-8; RWY01 → TWY L → TWY T2 → stands Nr. 9-13; RWY01 → TWY L → stands Nr.14-23,23L,23R,200-209; RWY01 → TWY M → stands Nr.301-312
RWY19	stands Nr.1-8 → TWY T4 → TWY T1 → TWY L → RWY19; stands Nr.9-13 → TWY T2 → TWY L → RWY19	RWY19 → TWY A → TWY H → stands Nr.1-8; RWY19 → TWY J → stands Nr. 9-13; RWY19 → TWY J → stands Nr.14-23,23L,23R,200-209; RWY19 → TWY E(west of A) → stands Nr.301-312
Note: Actual taxiing route shall follow ATC instructions.		

2.3 滑行道的滑行限制 /Taxiing limits:

滑行道 /TWYs	航空器翼展限制 / Wing span limits for aircraft
T1	<36m
H(west of T4), M	≤ 52m
T3	≤ 64.92m

H(east of T4), J, T4	≤ 65m
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2.4 航空器禁止在滑行线、滑行道上做180° 转弯；

2.4 180° turn around on TWY is forbidden;

2.5 起飞航空器从等待位置到对正跑道时间应控制在 60s 以内；落地航空器从接地到滑出跑道时间应控制在 50s 以内。如航空器驾驶员不能满足跑道占用时间要求的，应当及时通知塔台管制员；

2.5 Departure aircraft shall finish RWY alignment within 60s from holding position. Landing aircraft shall fully vacate RWY within 50s after touchdown. If flight crew cannot fulfill the process within the required time, pilot shall inform TWR ATC in time;

2.6 更换跑道运行方向过程中，当跑道顺风分量大于3.5m/s，但小于5m/s时，管制员向航空器驾驶员通报实时风向风速，可以短时指挥航空器顺风起飞或着陆，航空器驾驶员如不能执行，应及时报告管制员。

2.6 During changing operation direction of RWY, when downwind speed is more than 3.5m/s but less than 5m/s, ATC shall inform flight crew. ATC could conduct aircraft for downwind take-off or landing for a short time. If aircraft unable to execute, pilot shall inform controller in time.

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(m)	机身长度限制 / Fuselage limits(m)	滑入、滑出方式 /Enter or exit
Nr.1, 4-6, 9-13	36	44.51	Taxi in/Push back
Nr.7, 8	65	73.9	Taxi in/Push back
Nr. 14	65	75.36	Taxi in/Push back
Nr.23	64.75	66.8	Taxi in/Push back
Nr.16-22	36	44.5	Taxi in/Push back
Nr.23L,23R	36	45	Taxi in/Push back
Nr. 2, 3, 15, 306, 307, 311, 312	47.57	54.94	Taxi in/Push back
Nr. 200-209	36	46.5	Taxi in/Push back
Nr. 301-304	36	39.47	Taxi in/Taxi out
Nr. 308, 309	64.92	70.67	Taxi in/Push back

3.2 不能同时使用的机位 / Stands forbidden to use simultaneously:

使用机位 /The stand in use	不能同时使用的机位 /The stands forbidden to be used
14(wing span>52m)	11-13,15,16
23(wing span>52m)	21,22
When aircraft parking/docking at stands Nr.01-23, 23L and 23R, adjacent stands are not allowed to operate simultaneously.	

3.3 未经塔台同意, 严禁航空器利用自身动力倒滑;

3.4 发动机试车, 需经塔台许可, 并在指定的地点进行。禁止在客机坪和廊桥附近试大车。发动机试慢车, 需经指挥中心和塔台许可, 在 201-209,301-304,306-309,311-312号停机位进行, 禁止在 1-23,23L 和 23R 停机位试车。

3.5 为降低碳排放及噪音, 停靠航站楼停机位的航空器(除 A380 机型外)关闭 APU, 接驳地面电源及空调系统。地面电源 400Hz 电源与飞机地面空调具体详见下表:

3.3 Push-back of aircraft on its own power is strictly forbidden without Tower Control clearance;

3.4 Engine run-ups are subject to Tower Control clearance, and may only be carried out at a designated location. Fast engine run-ups near boarding bridges or on apron are strictly forbidden. Engine idle are subject to OP-CTL and TWR clearance, and may only be carried out at stands Nr.201-209, 301-304, 306-309, 311-312, it is forbidden to be carried out at stands Nr.1-23,23L and 23R.

3.5 To reduce carbon emissions and noise, aircrafts (except A380) parking at the terminal apron should close APU, and connect to the ground power and air conditioning system. The 400Hz ground power and ground air conditioning see the table below:

机位 /Stands	400Hz 电源功率 / 400Hz power supply(KVA)	400Hz 电源台数 / Number of 400Hz power	飞机外接空调功率 / Aircraft external air c o n d i t i o n i n g power(KW)	飞机外接空调台数 / Number of external air conditioners
Nr.1, 4-6, 9-13,16-22	90	1	equipment power 106 cool capacity 210	1
Nr.2, 3,15, 23	90	1	equipment power 140 cool capacity 320	1
Nr.7, 8, 14	90	2	equipment power 106 cool capacity 210	2

4. 进、离场管制规定

无

4. Air traffic control regulations

Nil

5. 机场的 II/III 类运行

5.1 使用 HUD 实施特殊批准的低能见度运行

5.1.1 可使用 HUD 在本场 RWY01/19 实施特殊批准的 II 类精密进近和 RVR150m 低能见度起飞。

5.1.2 低能见度运行的准备、实施和终止

5.1.2.1 准备阶段

5. CAT II/III operations at AD

5.1 LVP based on HUD SA CAT I/II

5.1.1 Low visibility takeoff with RVR 150m and CAT II operation based on HUD for RWY01/19.

5.1.2 Preparation, implement and closure of Low Visibility

Operation Procedures

5.1.2.1 Preparation

(1) 当跑道视程下降至550m且预计30min内下降至450m以下, 或者云高(或垂直能见度)下降至60m且预计30min内将下降至45m以下时, 由空管塔台通知机场指挥中心启动 HUD 低能见度运行准备。

(2) 机场指挥中心通报各保障单位做好 HUD 低能见度运行准备工作。

(3) 各保障单位完成 HUD 低能见度运行准备工作后报告机场指挥中心。

(4) 机场指挥中心将 HUD 低能见度运行准备情况报告空管塔台。

5.1.2.2 实施阶段

(1) 当跑道视程预计低于450m, 不低于150m, 云高(或垂直能见度)不低于30m时, 且经确认机场具备保障条件后, 由空管塔台通知机场指挥中心启动HUD低能见度运行。

(2) 机场指挥中心通知各保障单位启动 HUD 低能见度运行。

5.1.2.3 终止阶段

(1) 当RVR持续高于550m或低于150m或经检查确认机场不具备保障条件时, 空管塔台通知机场指挥中心终止HUD低能见度运行。

(2) 机场指挥中心通知各保障单位终止 HUD 低能见度运行。

5.2 航空器引导

5.2.1 使用HUD实施特殊批准II类运行时, 机组应严格按照管制指令给出的线路跟随引导车滑行。

5.2.2 使用 HUD 实施低能见度起飞时, 机组应严格按照引导车的引导路线滑行, 经塔台许可后方可进入A滑行道。

5.3 其他

5.3.1 准备使用 HUD 实施低能见度运行的航空器机组应主动向管制员报告。

5.3.2 低能见度运行时, 飞机滑行过程中如需中止, 机组应立即报告空管塔台, 按管制员同意的处置方式退出低能见度运行。

6. 除冰规则

无

(1) When RVR decrease to 550m and expected to decrease to 450m or below in 30min, or ceiling(or vertical visibility) decrease to 60m and expected to 45m or below in 30min, TWR notify the airport control center operate HUD Low Visibility Operation Procedures preparation.

(2) The airport control center notify TWR and other related units prepare HUD Low Visibility Operation Procedures.

(3) After complete the preparation of HUD Low Visibility Operation, relevant units report to the airport control center.

(4) The airport control center report the preparation of HUD Low Visibility Operation to TWR.

5.1.2.2 Implement

(1) When RVR expected below 450m and not below 150m, ceiling(or vertical visibility) exceed 30m, and confirm aerodrome have the capability of LVP, TWR notify airport control center operate HUD Low Visibility Procedures.

(2) The airport control center notify other related units operate HUD Low Visibility Procedures.

5.1.2.3 Closure

(1) When RVR exceed 550m or below 150m or the airport condition hasn't got qualified for LVP, tower control shall inform airport control center to terminate LVP.

(2) The airport control center shall inform relative department to terminate LVP.

5.2 Aircraft guidance

5.2.1 When operating LVP based on HUD SA CAT I/II, aircrew must follow the follow-me vehicle.

5.2.2 Aircraft operating LVP to departure, aircrew shall acquire TWR clearance, before taxi in TWY A.

5.3 Other informations

5.3.1 Aircraft prepare to implement LVP shall report to ATC.

5.3.2 Aircraft should stop taxiing, and report to Tower control if terminate LVP, then follow ATC instructions.

6. Rules for deicing

Nil

7. 平行跑道同时仪表运行

无

7. Simultaneous operations on parallel runways

Nil

8. 警告

机场跑道西侧有平行滑行道，不要将其误认为跑道。

8. Warning

Do not mistake the main TWY at west of RWY for RWY.

9. 直升机飞行限制，直升机停靠区

无

9. Helicopter operation restrictions and helicopter parking/docking area

Nil

ZSJN AD 2.21 噪音限制规定及减噪程序

无

ZSJN AD 2.21 Noise restrictions and Noise abatement procedures

Nil

ZSJN AD 2.22 飞行程序**1. 总则**

除经塔台特殊许可外，在塔台管制区内的飞行，必须按照仪表飞行规则进行。

1. General

Flights within Tower Control Area shall operate under IFR unless special clearance has been obtained from Tower Control.

2. 起落航线

起落航线在跑道两侧均可进行，A、B类航空器高度为350米，C、D类航空器高度为500米。

2. Traffic circuits

Traffic circuits shall be made to both sides of runway, at the altitude of 350m for aircraft CAT A/B, and 500m for aircraft CAT C/D.

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

4.1 济南进近管制区域内实施雷达管制。航空器最小水平间隔为6千米。

4. Radar procedures and/or ADS-B procedures

4.1 Radar control within Jinan APP has been implemented. The minimum horizontal radar separation is 6km.

4.2 最低监视引导高度扇区 /Surveillance Minimum Altitude Sectors	
Sector 1	ALT limit: 600m or above
N370934E1163935-N372912E1173000-N372930E1173057-N373417E1174630-N370412E1174630-N365330E1172700-N364407E1172700-N364407E1170417-N365330E1170414-N370934E1163935	
Sector 2	ALT limit: 700m or above
N364407E1170417- N364407E1172700-N364124E1172700-N364123E1170714-N364407E1170417	
Sector 3	ALT limit: 900m or above
N370934E1163935-N365330E1170414-N364407E1170417-N364123E1170714-N364124E1172700-N363812E1172700-N363814E1171157-N363906E1170805-N363904E1163930-N370934E1163935	
Sector 4	ALT limit: 1200m or above
N363904E1163930-N363906E1170805-N363814E1171157-N363812E1172700-N364124E1172700-N364407E1172700-N365330E1172700-N370412E1174630-N363400E1174630-N363400E1163932-N363904E1163930	
Sector 5	ALT limit: 1500m or above
N364000E1152400-N370934E1163935-N363904E1163930-N363400E1163932-N363400E1174630-N370412E1174630-N373417E1174630-N374241E1181300-N363800E1181300-N362433E1174630-N362436E1165500-N360002E1165500-N360002E1152530-N364000E1152400	
Sector 6	ALT limit: 2100m or above
N362436E1165500-N362433E1174630-N363800E1181300-N360002E1181300-N360002E1165500-N362436E1165500(except a circle with a radius of 13km centered on N361542E1170610)	
Sector 7	ALT limit: 2200m or above
A circle with a radius of 13km centered on N361542E1170610	

5. 无线电通信失效程序**5.1 航空器通信失效**

5.1.1 如果航空器具备信号接收能力，根据接收到的管制指令继续飞行；

5.1.2 如果航空器不具备信号接收能力，航空器应按照下列特定的进近程序继续进近并尽快落地；如果本场不具备落地条件，飞行员可自行决定返航或者备降；

5. Radio communication failure procedures**5.1 Aircraft communication failure**

5.1.1 If the radio receiver available, aircraft shall follow the instruction to fly;

5.1.2 If the radio receiver not available, aircraft shall continue to approach according to the following specific procedures as soon as possible; If condition of airport is not available for landing, the aircraft can decide to return or alternate by themselves;

a 01号跑道着陆

航空器按照最后接收到的管制员指令高度：如果未过起始进近定位点，则保持指令高度飞向YQG(遥墙VOR)进入标准等待程序，下降至起始进近高度1200m，然后按照01号跑道仪表进近图着陆。如果已经过起始进近定位点且未获得落地许可，则应该按01号跑道仪表进近图进近至决断高度（或保持最低下降高度至复飞点）复飞，然后上升至1200m飞向YQG(遥墙VOR)，再按01号跑道仪表进近图着陆。

b 19号跑道着陆

航空器按照最后接收到的管制员指令高度：如果未过起始进近定位点，则保持指令高度飞向YQG(遥墙VOR)进入标准等待程序，下降至起始进近高度1500m，然后按照19号跑道仪表进近图着陆；如果已经过起始进近定位点且未获得落地许可，则应该按19号跑道仪表进近图进近至决断高度（或保持最低下降高度至复飞点）复飞，然后上升至加入1500m飞向YQG(遥墙VOR)，再按19号跑道仪表进近图着陆。

5.2 本场通信失效

本场无线电收发功能失效，航空器无法与管制单位建立有效的通讯联系时，航空器应联系上一管制单位，并按照接收管制单位的管制指令继续飞行；

5.3 无线电通信恢复

失去通信联络的航空器已经着陆，或者已经恢复联络的，可恢复正常的管制运行，并立即通知相关管制单位。

6. 目视飞行程序

无

7. 目视飞行航线

无

8. 目视参考点

无

a Landing to North

According to the last command ALT: Aircraft should maintain command ALT fly to YQG(Yaoqiang VOR) and join the standard holding procedure if it has not over IAF, then descend to the initial approach altitude 1200m, approach and land according to RWY 01 instrument approach procedure; If aircraft has already fly over IAF without receiving landing clearance, it should approach to decision altitude (or maintain minima descend altitude to missed approach point) and go around, then climb to 1200m to YQG(Yaoqiang VOR) and land according to RWY01 instrument approach procedure;

b Landing to south

According to the last command ALT: Aircraft should maintain command ALT fly to YQG(Yaoqiang VOR) and join the standard holding procedure if it has not over IAF, then descend to the initial approach altitude 1500m, approach and land according to RWY 19 instrument approach procedure; If aircraft has already over IAF without receiving landing clearance, it should approach to decision altitude (or maintain minima descend altitude to missed approach point) and go around, then climb to 1500m to YQG(Yaoqiang VOR) and land according to RWY19 instrument approach procedure;

5.2 Aerodrome communication failure

If aircraft cannot establish communication with the aerodrome control unit, aircraft shall contact the previous control unit, and follow the instruction to continue;

5.3 Radio communication return to normal

It is available to resume activities when the aircraft that lose touch via Communication Channel has landed or get in touch again. Inform the ATC office immediately.

6. Procedures for VFR flights

Nil

7. VFR route

Nil

8. Visual reference point

Nil

9. 其它规定

9.1 对机组的要求:

9.1.1 复诵塔台管制员滑行指令,尤其是界限性指令,发现疑问及时证实;

9.1.2 在低能见度情况下,必须向塔台管制员报告脱离的跑道和所使用的滑行道等具体位置;

9.1.3 专机滑行路线以管制员通知为准。

9. Other regulations

9.1 Requirements for pilots:

9.1.1 Repeat the taxiing instructions issued by TWR, especially those contain boundary limitation. Make it clear when there is a doubt;

9.1.2 After vacating RWY, especially under conditions of low visibility, report the RWY designation and TWY designation on initial contact with TWR;

9.1.3 Taxiing routes of special flight will be instructed by ATC.

10. 区域导航飞行程序相关数据

10. Data for RNAV flight procedures

Waypoint list

Waypoint ID	COORDINATES	Waypoint ID	COORDINATES
JN102	N365813 E1171258	JN210	N363840 E1170208
JN103	N370231 E1171258	JN211	N361626 E1172208
JN104	N370708 E1171258	JN213	N364926 E1165446
JN105	N371633 E1171258	DYN	N373142E1184712
JN106	N372206 E1173107	WXI	N362148 E1145500
JN107	N370708 E1170204	YQG	N365000 E1171254
JN109	N370708 E1172209	ABTUB	N3600.0 E11722.1
JN110	N370232 E1172208	BASOV	N3727.4 E11813.0
JN111	N364906 E1172207	DALIM	N3625.1 E11712.8
JN201	N364746 E1171258	GULEK	N3633.4 E11524.3
JN203	N364155 E1171258	NOBUP	N3721.3 E11725.0
JN204	N363841 E1171258	OLRED	N3707.1 E11649.2
JN205	N363609 E1171258	PANKI	N3717.8 E11700.0
JN206	N363254 E1171258	TUMLO	N3713.0 E11647.7
JN207	N363254 E1172205	MUMUN	N364735 E1160000
JN208	N363840 E1172205	P352	N364936 E1170207
JN209	N363253 E1170208		

Path Terminator	Waypoint ID	Fly over	Magnetic Course (°)	Turn Direction	Altitude (m)	IAS (kt)	VPA/ TCH	Navigation Specification
RWY01 Departure DYN-91D								

CF	JN104		006					RNAV1
TF	JN105				↑ 1500			RNAV1
TF	NOBUP							RNAV1
TF	JN106				↑ 2400 or by ATC			RNAV1
TF	BASOV							RNAV1
TF	DYN							RNAV1
RWY01 Departure ABT-91D								
CF	JN102	Y	006					RNAV1
DF	JN111			R		MAX230		RNAV1
TF	JN207				2400 or by ATC			RNAV1
TF	ABTUB							RNAV1
RWY01 Departure WXI-91D								
CF	JN104		006					RNAV1
TF	OLRED				↑ 2700 or by ATC	MAX230		RNAV1
TF	MUMUN							RNAV1
TF	GULEK							RNAV1
TF	WXI							RNAV1
RWY01 Departure TUM-91D								
CF	JN104		006					RNAV1
TF	OLRED				↑ 2700 or by ATC	MAX230		RNAV1
TF	TUMLO							RNAV1
RWY19 Departure DYN-81D								
CA			186		500			RNAV1
DF	JN111			L		MAX230		RNAV1
TF	NOBUP							RNAV1
TF	JN106				↑ 2400 or by ATC			RNAV1
TF	BASOV							RNAV1
TF	DYN							RNAV1
RWY19 Departure ABT-81D								
CA			186		500			RNAV1
DF	DALIM				↑ 2100		4.5%	RNAV1
TF	JN211				↑ 2400			RNAV1
TF	ABTUB							RNAV1

RWY19 Departure WXI-81D								
CA			186		500			RNAV1
DF	P352			R		MAX230		RNAV1
TF	JN213				↑ 2700 or by ATC			RNAV1
TF	MUMUN							RNAV1
TF	GULEK							RNAV1
TF	WXI							RNAV1
RWY19 Departure WXI-82D								
CA			186		500			RNAV1
DF	P352			R		MAX230		RNAV1
TF	OLRED				↑ 2700 or by ATC			RNAV1
TF	MUMUN							RNAV1
TF	GULEK							RNAV1
TF	WXI							RNAV1
RWY19 Departure TUM-81D								
CA			186		500			RNAV1
DF	P352			R		MAX230		RNAV1
TF	OLRED				↑ 2700 or by ATC			RNAV1
TF	TUMLO							RNAV1
RWY01 Arrival DYN-91A								
IF	DYN							RNAV1
TF	BASOV							RNAV1
TF	JN106				↑ 2400 or by ATC			RNAV1
TF	NOBUP							RNAV1
TF	JN111				↑ 2100			RNAV1
TF	JN208							RNAV1
TF	JN207				1800	MAX210		RNAV1
RWY01 Arrival ABT-91A								
IF	ABTUB							RNAV1
TF	DALIM				2100	MAX210		RNAV1
RWY01 Arrival WXI-91A								
IF	WXI							RNAV1
TF	GULEK							RNAV1
TF	MUMUN							RNAV1

TF	JN213				↑ 2700 or by ATC			RNAV1
TF	P352				2100			RNAV1
TF	JN210							RNAV1
TF	JN209				1800	MAX210		RNAV1
RWY01 Arrival WXI-92A								
IF	WXI							RNAV1
TF	GULEK							RNAV1
TF	MUMUN							RNAV1
TF	OLRED				↑ 2700 or by ATC			RNAV1
TF	P352				2100			RNAV1
TF	JN210							RNAV1
TF	JN209				1800	MAX210		RNAV1
RWY01 Arrival PAN-91A								
IF	PANKI							RNAV1
TF	P352				2100			RNAV1
TF	JN210							RNAV1
TF	JN209				1800	MAX210		RNAV1
RWY01 Approach VIA JN207								
IF	JN207				1800	MAX210		RNAV1
TF	JN206				1500			RNAV1
TF	JN205				1200			RNAV1
TF	JN204				1000			RNAV1
TF	JN203				700			RNAV1
RWY01 Approach VIA DALIM								
IF	DALIM				2100	MAX210		RNAV1
TF	JN206				1500			RNAV1
TF	JN205				1200			RNAV1
TF	JN204				1000			RNAV1
TF	JN203				700			RNAV1
RWY01 Approach VIA JN209								
IF	JN209				1800	MAX210		RNAV1
TF	JN206				1500			RNAV1
TF	JN205				1200			RNAV1
TF	JN204				1000			RNAV1
TF	JN203				700			RNAV1
RWY01 Missed approach								

CA			006		500			RNP1
DF	JN111			R	↑ 1200	MAX210		RNP1
HM	JN111	Y	186	L	Alt by ATC	MAX230		RNP1
RWY01 Holding (outbound time:1min)								
HM	NOBUP	Y	267	L	2700	MAX230		RNAV1
HM	JN111	Y	186	L	2400	MAX230		RNAV1
HM	JN206	Y	006	R	1800	MAX210		RNAV1
HM	P352	Y	186	L	2400	MAX230		RNAV1
RWY19 Arrival DYN-81A								
IF	DYN							RNAV1
TF	BASOV							RNAV1
TF	JN106				↑ 2400 or by ATC			RNAV1
TF	NOBUP							RNAV1
TF	JN105				1500	MAX210		RNAV1
RWY19 Arrival ABT-81A								
IF	ABTUB							RNAV1
TF	JN207							RNAV1
TF	JN111				1800			RNAV1
TF	JN110							RNAV1
TF	JN109				1200	MAX210		RNAV1
RWY19 Arrival WXI-81A								
IF	WXI							RNAV1
TF	GULEK							RNAV1
TF	MUMUN							RNAV1
TF	OLRED				↑ 2700 or by ATC			RNAV1
TF	JN107				1800	MAX210		RNAV1
RWY19 Arrival PAN-81A								
IF	PANKI							RNAV1
TF	JN105				1500	MAX210		RNAV1
RWY19 Approach VIA JN105								
IF	JN105				1500	MAX210		RNAV1
TF	JN104				900			RNAV1
TF	JN103				600			RNAV1
RWY19 Approach VIA JN107								
IF	JN107				1800	MAX210		RNAV1
TF	JN104				900			RNAV1

TF	JN103				600			RNAV1
RWY19 Approach VIA JN109								
IF	JN109				1200	MAX210		RNAV1
TF	JN104				900			RNAV1
TF	JN103				600			RNAV1
RWY19 Missed approach								
CA			186		500			RNP1
DF	JN111			L	↑ 1200	MAX210		RNP1
HM	JN111	Y	006	R	Alt by ATC	MAX230		RNP1
RWY19 Holding (outbound time:1min)								
HM	JN105	Y	249	L	1800	MAX230		RNAV1
HM	JN111	Y	006	R	2100	MAX230		RNAV1
HM	JN107	Y	096	R	2100	MAX230		RNAV1

ZSJN AD 2.23 其它资料**ZSJN AD 2.23 Other information**

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。

Activities of bird flocks are found all the year round. Aerodrome Authority resorts to dispersal methods to reduce bird activities.