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**区域导航飞行程序实施规定**  
**The Rules for Implementation of Area Navigation (RNAV) Flight Procedures**

**1. 飞行程序设计**

1.1 区域导航 (RNAV) 飞行程序按照国际民用航空组织 PANS-OPS Doc8168 和中国民用航空总局制定的有关规范进行设计。现阶段, 区域导航飞行程序只限于进场、离场、起始进近程序, 不包括中间进近、最后进近以及复飞程序。

1.2 为特定的导航源所设计的 RNAV 飞行程序在航图标题中标明了导航源类型, 如 VOR/DME、DME/DME 或 GNSS。对于以上三种导航源都能满足的程序则不再标明。

对基于 VOR/DME 的 RNAV 程序, 在航图中同时标明了 VOR/DME 基准台的识别代号。

1.3 如果程序允许使用不同的导航源, 则超障评估和计算是以准确度最差的导航源为准。

1.4 程序中的航路点除使用国际民用航空组织五字代码外, 还使用“字母-数字”的方法来定名, 即“AAXXX”, 其中 AA 为国际民用航空组织机场四字地名代码的后两位字母; X 为 0-9 的数字。但以下情况除外:

- 1) 如果航路点与导航台重合, 则使用该导航台的识别代号。

**1. Flight Procedure Design**

1.1 The RNAV procedures are designed thereunder ICAO PANS-OPS Doc8168 and related specifications of CAAC. In the current phase, the RNAV procedures are limited to SID, STAR and initial approach, not including intermediate approach, final approach and missed approach.

1.2 If the RNAV procedures are designed for specific sensors, the identification of sensor is included in the title of chart, such as VOR/DME, DME/DME or GNSS. For the procedure which can use any of the three sensors, no identification is required.

For RNAV procedure based on VOR/DME, the identification of the referenced VOR/DME is indicated in the chart as well.

1.3 If the procedures permit to use various navigation sensors, the evaluation and calculation of obstacle clearance are based on the worst one.

1.4 Besides the ICAO 5 letter name code used for the waypoint in the procedure, the “Alphabet-Number” of waypoint naming convention is used with a format of ‘AAXXX’, where ‘AA’ contains the last two characters of the aerodrome location indicator, ‘X’ is a numeric code from 0 to 9. The exceptions are:

- 1) If the waypoint is collocated with a navaid, three or two letter identifier of the navaid is used.

2) 如果航路点与跑道入口重合, 则使用“RWNNNA”或“RWNN”, 其中 NN 为跑道的数字编号, A 为“L”“R”或“C”。

## 2. 营运人审定要求

申请使用 RNAV 飞行程序的航空器营运人必须按照中国民用航空总局《在终端区实施区域导航的适航和运行批准》(AC-121FS-13), 或欧洲联合航空局临时指导材料《在欧洲指定空域进行精密区域导航运行的适航和运行批准》(TGL10), 或等同的标准, 并得到有关当局的审定批准。

## 3. 实施要求

3.1 RNAV 飞行程序应在雷达管制或雷达监视条件下实施, 飞行高度不应低于相应的雷达最低引导高度。

3.2 已获得运行批准的航空器营运人, 如申请执行 RNAV 飞行程序, 应在 ICAO 飞行计划第 10 项中填写字母“P”。

3.3 如果机载飞行管理系统数据更新级别不满足程序的要求, 则机组不得继续使用 RNAV 程序, 并应立即通知相应管制单位。

3.4 在飞行过程中, 如果发现航空器偏离标称航迹超过 2 公里, 或认为误差不可接受, 则机组或管制员应立即终止使用 RNAV 程序, 改用雷达引导或传统飞行程序。

## 4. 通话用语

4.1 空中交通管制员确认航空器的 RNAV 状态

- 1) (航空器呼号) 证实 RNAV 已批准
- 2) (航空器呼号) 报告能否 RNAV 运行

2) If the waypoint is collocated with the runway threshold, an identifier in the format 'RWNNNA' is used, where 'NN' is a RWY numeric code from 01 to 36 and 'A' is an RWY alphabetic code of 'L', 'C' or 'R' (if applicable).

## 2. Operator Certification

All the operators of aircraft applying to fly the RNAV procedures shall be certified by the responsible authority thereunder Airworthiness And Operational Approval For RNAV Operation In Terminal Area of CAAC (AC-121FS-13) or Airworthiness And Operational Approval Precision RNAV Operations In Designated European Airspace of JAA (TGL10), or equivalent standards.

## 3. Operation Practice

3.1 RNAV procedures shall be implemented under radar control or radar monitoring. Flight altitude shall not be below the appropriate Minimum Radar Vectoring Altitude (MRVA).

3.2 If the operators of aircraft approved for the RNAV operation apply to fly the RNAV procedure, the letter 'P' shall be filled in Field 10 of the ICAO flight plan.

3.3 If the navigation data updating of airborne system dose not satisfy the requirement of the procedure, flight crew shall not continue to fly the RNAV procedure and shall notice the related ATC unit as soon as possible.

3.4 During flight, if the aircraft is found deviating from the prescribed trajectory more than 2 kilometers or the deviation is regarded unacceptable, flight crew and controller shall stop using the RNAV procedures and change to radar vectoring or conventional procedure.

## 4. Radio Communication Phraseology

4.1 Controller to inquiry the aircraft RNAV status

- 1) (aircraft callsign) CONFIRM RNAV APPROVED
- 2) (aircraft callsign) ADVISE RNAV CAPABILITY

#### 4.2 飞行员回答航空器的 RNAV 状态

- 1) 不是 RNAV
- 2) 是 RNAV

#### 4.3 在 RNAV 空域中运行

- 1) (航空器呼号) 申请 RNAV 运行
- 2) (航空器呼号) 可以实施 RNAV 运行
- 3) (航空器呼号) 不能实施 RNAV 运行, (其它指令)
- 4) 由于设备原因不能保持 RNAV
- 5) 能够恢复 RNAV 时报告

注: 用于空中交通管制员确认航空器再次可以 RNAV 运行的状况。

#### 4.4 航空器进场

- 1) (航空器呼号) 可以沿〔标准进场〕进场
- 2) (航空器呼号) 可以沿〔标准进场〕进场并按规定下降
- 3) (航空器呼号) 可以直飞〔航路点〕

#### 4.5 航空器离场

(航空器呼号)〔标准仪表离场〕离场,  
[必要时, 其他指令]

### 5. 本规定自 2004 年 2 月 18 日 16:01 协调世界时起实施。

#### 4.2 Pilot to reply RNAV status

- 1) NEGATIVE RNAV
- 2) AFFIRM RNAV

#### 4.3 In the RNAV airspace

- 1) (aircraft callsign)REQUEST RNAV
- 2) (aircraft callsign)RNAV APPROVED
- 3) (aircraft callsign)UNABLE RNAV, (alternative instructions)
- 4) UNABLE RNAV DUE EQUIPMENT
- 5) REPORT ABLE TO RESUME RNAV

*Note: used for controller to confirm the status of aircraft resuming RNAV capability.*

#### 4.4 Arrival

- 1) (aircraft callsign) CLEARED [STAR] ARRIVAL
- 2) (aircraft callsign) CLEARED [STAR] ARRIVAL AND PROFILE
- 3) (aircraft callsign) CLEARED DIRECT TO [waypoint]

#### 4.5 Departure

(aircraft callsign) CLEARED [SID] DEPARTURE, [further instruction if necessary]

### 5. These provisions take effect as of 16:01 on February 18, 2004.