

## **Příloha 2 – Výcvik členů letové posádky**

### **RNP AR APPROACH TRAINING (LOWI)**

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#### **1. Training Purpose**

The procedure RNP AR APCH at the Innsbruck Airport is complex and requires additional ground and FSTD training for TVS pilots operating this procedure. The course is designed to ensure a safe conduction of RNP AR APCH in Innsbruck by revising general information about RNP, learning new capability of RNP AR and training an airmanship of this procedure in FSTD.

#### **2. Entry Requirements**

An applicant shall hold:

- a) LOWI aerodrome competence qualification
- b) ICAO English level 5 or 6.

The applicant has also completed at least 1000 flight hours on B737 airplanes and respective position (commander as PIC; first officer as the first officer).

#### **3. Credit for Previous Experience**

Flight crew member with RNP AR APCH experience with TVS operator shall undertake an abbreviated Theoretical Training when changing aircraft type.

Flight crew member with RNP AR APCH experience with another EASA operator shall undertake an abbreviated Theoretical Training if operates a different/same type on which the previous RNP AR APCH experience was gained.

**Flight Training isn't subject of previous experience.**

## 4. Time Scale

	Initial course	Credited course	Recurrent course
THEORETICAL TRAINING	4 hours  <i>See paragraph 4.1.</i>	2 hours  - <i>brief theoretical course</i> - <i>focus on the specific content of this procedure or aircraft specifics</i>	N/A
FLIGHT TRAINING	3 hours  <i>See paragraph 6.</i>	3 hours	2 hours  - <i>focus on the specific content of this procedure (RF legs, alerts, loss of capability, missed approach procedure, etc.)</i>

## 5. Theoretical Training

RNP AR APCH ground training course shall cover RNP AR APCH systems, operation, classifications and limitations to ensure proper understanding of RNP AR APCH concept.

RNP AR APCH training shall be conducted only by authorized personnel (ground instructor). Completion of each specific part of RNP AR APCH training shall be certified in the syllabus by ground instructor with signature and he/she is also responsible for this.

### 5.1. Pilot's theoretical knowledge of RNP AR APCH:

Additional knowledge to RNP APPROACH:

- a) definition of RF leg
- b) the difference between RNP AR APCH and RNP APCH
- c) required equipment for RNP AR APCH operations
  - its full understanding including their limitations and the impact of their failure
- d) procedure characteristics:
  - an approach chart
  - contingency missed approach procedures/charts
  - notes and restrictions
  - weather specifics
  - RF segments and their limitations
- e) the RNP values for different phases of flight

- f) the effect of wind on aircraft performance during RNP AR APCH procedure
- g) the effect of groundspeed on the accuracy of RNP AR APCH, excessive bank angles and their impact on the approach, compliance with speed restrictions
- h) when and how to terminate RNP navigation and transfer to conventional navigation due to loss of RNP or required equipment
- i) the events that lead to a missed approach procedure during RNP AR APCH
- j) normal and abnormal procedures
  - in accordance with OM and AFM
- k) contingency procedures
  - in case of loss or degradation of the RNP AR APCH capability
- l) flight reports after conducting RNP AR APCH procedure and the reasons for unsatisfactory approaches

## 6. Flight Training

In addition to Theoretical Ground Training, the flight crew must receive proper flight training in an FSTD.

During the simulator training shall be verified (by instructors or examiners) that the trainee understands and is able to demonstrate these specifics:

### a) RNP AR APCH procedures and limitations:

- the potentially detrimental effect of:
  - reducing the flap setting,
  - reducing/increasing the bank angle, or
  - increasing airspeeds in turns
- short and complete briefings in accordance with OM and the important role of crew resource management (CRM) during the whole flight:
  - teamwork
  - discipline
  - situational awareness
  - decision making
  - problem solving

### b) the set-up of the cockpit during an approach

- proper programming and operating systems that support the RNP AR APCH operations:
  - handling TOGA to LNAV

- GNSS, INS, conventional navigation
- practical usage of systems that support track monitoring, weather and obstacle avoidance:
  - aircraft weather radar
  - TAWS
- procedures for verifying the most current altimeter setting of each flight crew member
- proper aircraft configuration to maintain correct airspeed and glide path during the approach
- monitoring of FTE/ANP and associated possible go-around operation

**c) the abnormal/contingency operations:**

- loss of RNP capability or GNSS signals and its correct and immediate resolution:
  - appropriately selected missed approach procedure
  - continue to land if visual reference is established and maintained
  - put emphasis on achieving safe separation from terrain and obstacles
- engine failure during the approach and missed approach procedure

**6.1. Flight Training Syllabus:**

COURSE TYPE	RWY IN USE	SPECIFIC CONTENT OF FSTD TRAINING
<b>INC CRC REC</b>	<b>RWY 08 (RNP 0.30)</b>	1. Position: before passing IAF ELMEM (daytime)  Approach briefing – CHECK Approach preparations – altimeter crosscheck error  COMMENCE SPECIAL LOC/DME WEST PROCEDURE
		2. Position: before passing IAF ELMEM (daytime) Weather conditions: wind 350 degrees 8 kts, BKN014, M05/M07  Approach briefing – CHECKED Approach preparations – CHECKED  Visual contact above DA/H FULL STOP LANDING
		3. Position: on final approach (daytime) Weather conditions: wind 170 degrees 20 kts, OVC009  No visual contact at minimum FULL MISSED APPROACH PROCEDURE
		4. Position: on final approach (daytime) Weather conditions: wind 170 degrees 10 kts, OVC010  FMC DISAGREE alert message followed by ANP > RNP below 9 500 ft MSL

		<p>FULL CONTINGENCY MISSED APPROACH PROCEDURE until outbound LLZ OEJ</p>
		<p>5. Position: on final approach (nighttime) Weather conditions: wind 170 degrees 5 kts, BKN012</p> <p>Left engine failure during second RF leg LNAV/VNAV disengaged after TOGA</p> <p>CONTINUE RF LEG AND MISSED APPROACH PROCEDURE</p>
		<p>6. Position: on final approach (daytime) Weather conditions: wind 080 degrees 20 kts, gust 35, BKN030, 9999</p> <p>A/P failure before second RF leg</p> <p>Visual contact with RWY FULL STOP LANDING</p>
	<b>RWY 26 (RNP 0.30)</b>	<p>7. Position: before passing IAF RTT (daytime)</p> <p>Approach briefing: only 1 F/D available UNABLE TO COMMENCE RNP AR APCH PROCEDURE</p>
		<p>8. Position: before passing IAF RTT (daytime) Weather conditions: wind 260 degrees 12 kts, BKN011, VIS 5 km, M03/M05</p> <p>Approach briefing – CHECKED Approach preparations – CHECKED</p> <p>Visual contact at DA/H FULL STOP LANDING</p>
		<p>9. Position: on final approach (daytime) Weather conditions: wind 350 degrees 15 kts, BKN005</p> <p>No visual contact at minimum, GO AROUND Engine failure after TO/GA</p> <p>FOLLOW MISSED APPROACH PROCEDURE</p>
		<p>10. Position: on final approach (nighttime) Weather conditions: wind 170 degrees 10 kts, OVC006</p> <p>No visual contact at minimum, GO AROUND</p> <p>Loss of GNSS at the first passing WI006 FOLLOW CONTINGENCY MISSED APPROACH PROCEDURE</p>
	<b>RWY 26 (RNP 0.15)</b>	<p>11. Position: before passing IAF RTT (daytime) Weather conditions: wind 260 degrees 10 kts, OVC015, M08/M10</p> <p>Approach briefing – the temperature is under limit</p> <p>UNABLE TO COMMENCE RNP AR APCH PROCEDURE</p>
		<p>12. Position: before passing IAF RTT (nighttime) Weather conditions: wind 350 degrees 10 kts, BKN009, VIS 3 km</p> <p>Approach briefing – CHECKED Approach preparations – CHECKED</p> <p>VERIFY POSTION alert message at D5.0 OEV</p> <p>No visual contact with RWY FOLLOW SPECIAL LOC/DME EAST MISSED APPROACH PROCEDURE</p>
		<p>13. Position: before passing IAF RTT (daytime) Weather conditions: wind 350 degrees 20 kts, OVC020, VIS 9 km</p> <p>Approach briefing – CHECKED Approach preparations – CHECKED</p>

		<p>IRS NAV ONLY alert message at D8.5 OEV</p> <p>ABANDON RNP AR APCH FOLLOW LOC/DME EAST PROCEDURE and FULL STOP LANDING</p>
		<p>14. Position: on final approach (daytime) Weather conditions: wind 260 degrees 5 kts, OVC002</p> <p>A/P failure at D2.0 OEV</p> <p>No visual contact with RWY FULL CONTINGENCY MISSED APPROACH PROCEDURE</p>
	<b>RWY 26 (LOC R)</b>	<p>15. Position: before passing IAF RTT (daytime) Weather conditions: wind 170 degrees 15 kts, OVC004, VIS 3 km</p> <p>No visual contact with RWY</p> <p>FULL RNP AR MISSED APPROACH PROCEDURE</p>

Course type:

INC = initial course

CRC = credited course

REC = recurrent course (*selected scenarios, see in 8.*)

## 7. Checking of knowledge

The operator shall check flight crew member's knowledge of RNP AR APCH procedures prior to employing RNP AR APCH operations.

### 7.1. Ground course test:

The final test is required after completing Theoretical Ground Training (*see 5.1.*)

### 7.2. FSTD examination:

The final examination of FSTD Training is in the extent of **1 hour** and it is provided by the TRE privileges holder.

The examiner must evaluate an applicant in accordance with his ability to perform every aspect of the training's content.

**If an applicant completes theoretical and simulator training with an acceptable evaluation, he/she may operate RNP AR APCH in LOWI as a pilot-in-command or as a co-pilot.**

### 7.3. RNP AR APCH qualification:

RNP AR APCH Qualification License is issued by TVS Flight Department and is valid only together with the valid pilot license.

## 8. Recurrent Training

The operator must provide recurrent training of RNP AR APCH procedures in addition to the overall training programme.

The recurrent training is performed on FSTD in a minimum extent of **1 hour**.

Recurrent training must contain RNP AR APCH procedure with:

1. From IAF to full stop landing
2. RWY 26 approach with GNSS loss at D5.0 OEV
3. RWY 08 approach with FMC loss before WI751 and full missed approach procedure
4. RWY 08 with F/D failure on RF segment, visual contact with RWY, full stop landing
5. No visual contact at DA/H, go around with engine failure after TOGA
6. RWY 26 approach with GNSS loss during missed approach procedure

If RNP AR APCH has not been flown or recurrent training has not been performed within a period of more than **12 months**, the **credited course** is required (initial flight training only).

Flight crew member with RNP AR APCH experience with TVS operator shall undertake the Recurrent Training when changing a variant of aircraft within the same type rating. However, the operator must ensure proper theoretical ground training, which will include all differences and/or similarities between the variants of aircraft, including:

1. required equipment for RNP AR APCH operations,
2. procedure characteristics,
3. operating, contingency and missed approach procedures and
4. engine failure.

## 9. Training Records

Record of theoretical training including progress test/checking will be stored in the personal envelope.