

# CONSIDERATIONS CONCERNING THE PROCESS OF OPERATIONALIZATION WITH AERONAUTICAL PERSONNEL OF THE FIRST AVIATION STRUCTURE EQUIPPED WITH MULTIROLE AIRCRAFT

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DOI: 10.19062/1842-9238.2023.21.2.9

**Abstract:** Romania's membership to the North Atlantic Alliance, the need to ensure interoperability with the aeronautical combat systems of the partners, the reality of equipping the Romanian Air Force with east technology, which could no longer carry out the planned peace service enforcement missions and air defense to crisis and war, imposed on the responsible factors the decision of purchasing the first aviation structure endowed with multirole aircraft. The process was also amplified by the evolutions that took place at the eastern border of NATO, including the borders of Romania, especially after the annexation, in 2014, of the Crimean Peninsula by the Russian Federation. Of absolute complexity and novelty, the acquisition, the training of the aeronautical personnel for the operation of new combat equipment and related activities have imposed on the structures and personnel involved in this process responsibility, innovation, devotion, the first and most important and consistent program of endowment of the Romanian Army being a recognized success of the Romanian Air Force and inspirational, for the subsequent acquisition programs of the national defense.

**Keywords:** multirole aircraft, acquisition, aviation, mission, operationalization, aeronautical personnel.

## 1. INTRODUCTION

The motivation for writing this article consists of the presentation of the essential aspects that were highlighted in the modernization process of the Romanian Air Force with the first combat structure endowed with F-16 multirole aircraft, in order to achieve the operating standards of the armies of NATO member countries.

There will be highlighted the stages of the process of drafting the necessary legislative and regulatory framework, the difficulties of the initial training process, the recruitment and selection of aeronautical personnel according to the new architecture of framing the multirole aviation structure, and, completely different from the philosophy of personnel operation specific to the east fighter-type aircraft, training stages abroad and in the country, innovative solutions for the development of each stage according to the assumed level of ambition.

## 2. 53 SQUADRON IN THE FRAMEWORK OF PEACE AND WAR OF THE ROMANIAN MILITARY AERONAUTICS

The dismemberment of Greater Romania in the dramatic summer of 1940, through the abusive revision of the borders established and defended at the end of the War of National Enlargement, following the Soviet ultimatums at the end of June 1940, followed by the occupation of Bessarabia, Northern Bukovina and Hercegovina, the fascist Dictate of Vienna of 30 August 1940 and the annexation of North-West Transylvania from Hungary, the painful process concluded with the annexation of the Cadrilater from Bulgaria in early September 1940, reoriented the Romanian state policy in the direction of preparation, for the recovery of the lost territories, including the field of army.

Isolated internationally, with the imposition of the blockade by the great powers regarding the acquisition of weapons from abroad, Romania, thanks to its traditional relations with the British Empire, succeeded, in full painful outcome of international relations, in the acquisition of a modern long-range fighter squadron, equipped with the famous Hawker Hurricane aircraft, which was assigned to the 1st Fighter Flotilla, operating on Pipera airfield.

After some acquisitions of fighter aircraft from Germany Me 109 E, on June 1, 1940, within the 1st Fighter Flotilla was formed the 7th Fighter Group, consisting of the 53rd Fighter Squadron (equipped with Hawker Hurricane aircraft) and the 57th Fighter Squadron (equipped with Messerschmitt 109 aircraft).[5]

Captain aviator Ioan Rosescu was appointed to command the squadron, who handed over the command to aviator captain Emil Geogescu, considering the fact that he was a student at the War School. The members of the squadron had big names, future aces of military aviation or holders of prestigious orders, respectively lieutenant aviators Constantin (Bâzu) Cantacuzino, Toma Lucian, Horia Agarici, aviator adjutants Rădulescu, Pomut, Camenceanu, Cordescu, Popescu, Culcer, etc.

After executing specific stages of operationalization and integration into different combat structures, considering the exceptional technical and tactical characteristics of the aircraft, the 53rd Fighter Squadron was deployed on Mamaia airfield, for air defense of the Black Sea coast.

At the beginning of mobilization and deployment on the airfields used in the fight for the liberation of Bessarabia and Bukovina, the 53rd Fighter Squadron was redeployed on the Buzău airfield, in the afternoon of June 21, 1941, with the mission of protecting the bombing formations that were to start the air operation in the morning of June 22, 1941. [5]

Throughout the air campaign for the liberation of Bessarabia and the conquest of Odessa, the 53rd Fighter Squadron had cover itself with glory, the exceptional deeds of weapons and air actions executed by this elite structure of the Romanian aviation engaged on the front being recorded in detail in the diaries of operations of the 1st Fighter Flotilla and the Air Combat Group.

A summary of the most important dates: June 22 - the first day of battle and the first 4 air victories, June 23 - aviator captain Horia Agarci engages alone 6 Soviet bombers and shoots down 3, in the afternoon, redeployed to Mamaia, 2 air victories, June 24 - 4 air victories, JUNE 30, THE GLORY DAY OF THE SQUADRON - 10 AIR VICTORIES, July 1 - a probable air victory, July 4 - 3 air victories, July 10 - an air victory, July 11 - 2 air victories, July 13 - 2 air victories, July 14 - an air victory, July 15 - an air victory, July 22 - 2 air victories, July 23 - 3 air victories, August 28 - 3 air victories, September 6 - an air victory, September 8 - 2 air victories and one probable one, SEPTEMBER 12 - near Odessa, aviator captain Ioan Rosescu, returned to the squadron, shoots down 2 bombers,

but crashes, with the plane on fire (the first and only loss of the 53rd Squadron), September 18 - the last air victory of the squadron on the Eastern Front.[5]

The balance of air victories reaches 52.1/3 of the total air victories obtained by the Romanian aviation in the Air Campaign for the liberation of Bessarabia and the conquest of Odessa (June 22 - October 16, 1941).

Until its deletion from the War Framework of the Romanian Royal Aeronautics, on December 15, 1944, the 53rd Fighter Squadron will participate with equally meritorious results in defending the national airspace against bombing raids by the Anglo-American aviation and will ensure the highly specialized pilot nuclei for the establishment of the first night fighter aviation structures of the Romanian military aviation.

This represents the ending of the exceptional episode of a fighting squadron, a structure that gave consistency to its history, the destiny, name and traditions of the 53rd Fighter Squadron being taken over, at the proposal of the Air Force General Staff / Personal Service and Mobilization, by the multirole combat squadron, equipped with F-16 aircraft, entered the Romanian Air Force on September 30, 2016.[6]

### **3. THE FOUNDATION AND ADOPTION OF THE DECISION-MAKING AND LEGISLATIVE FRAMEWORK OF “THE AIR FORCE MULTIROLE AIRCRAFT PROGRAM”**

Since 2007, the leadership of the Romanian Air Force, analyzing the situation of equipping military aviation with modern type East technology, considered that postponing a decision on the modernization of the air fleet will stay against the fulfillment of the missions assumed within the North Atlantic Alliance and will endanger Romania's air defense in crisis and war.

The analysis is more justified by the fact that the resource of the MiG-21 LanceR, the multirole aircraft, which was in service, was going to expire in the perspective of 2015-2017, and the transition of aeronautical personnel to another aircraft category required a process of at least 2 years.

Overcoming the political-military decision barriers, the army leadership managed to promote the first decision of the Supreme Council of National Defense to endow military aviation with a modern multirole fighter aircraft. It was planned to replace the MiG-21 LanceR aircraft with a device compatible with NATO standards, which would ensure low operating and maintenance costs during the entire 20-year life cycle.

The political and governmental situation at the time of 2007, the international situation that did not indicate high risks and threats to Romania and the estimation according to which the accession to NATO in 2014 and the EU in 2017 did not require special efforts to equip the army, followed by the profound economic crisis of the following years, with defense budgets at the limit of survival, postponed the necessary decisions for the implementation of the CSAT Decision.

The new security context after 2010, the obvious attitude of reconsideration of the Eastern European borders by the Russian Federation, along with the sharp cooling of Russia-NATO relations, have also determined a new repositioning of abandoned steps to modernize the Air Force.

The analysis of the offers compatible with Romania's strategic interests as a NATO member highlighted the fact that the F-16 aircraft is in accordance with the operational requirements substantiated by the Air Force General Staff and ensures the acquisition at low costs and high reliability logistics possibilities.

**The Supreme Council of National Defence**, based on the arguments and proposals formulated, with **Decision nr. S-70 of 27.09.2012** approved *the Concept for the gradual achievement of air defense capability within the program "Air Force Multirole Aircraft"*. [1]

In application of the CSAT decision, the Romanian Parliament adopted **Law nr. 240 of 15.07.2013**, *for achieving the air operational capability included in Phase I of the initial transition phase of the Concept for the gradual achievement of air defense capability within the "Air Force Multirole Aircraft" program*. [2] By law, the Romanian Government awarded to the Government of the Portuguese Republic the contract for the purchase of 12 F-16 A/B MLU-M 5.2 aircraft from the surplus, the aircrew training service in Portugal and Romania, the technical assistance service, as well as logistic support elements. By law, the Romanian Government awarded to the Government of the Portuguese Republic the contract for the purchase of 12 F-16 A/B MLU-M 5.2 aircraft from the surplus, the aircrew training service in Portugal and Romania, the technical assistance service, as well as logistic support elements. Also, successive Letter of Offer and Acceptance (LOA) contracts, specific to the Foreign Military Sales Program - FMS, were awarded to the United States Government for the purchase of the necessary weapons and ammunition, as well as the completion of the initial logistic support package and the training service.

As a beneficiary of the program, the Air Force General Staff had a decisive role in carrying out, both in its initiation process, in the elaboration of the necessary basic and subsequent normative acts, but also throughout the development.

The measures taken at the level of the Air Force considered, besides the multitude of operational and logistical aspects and the analysis of all possibilities of providing aeronautical personnel with training series between 2014 and 2017, the establishment of target groups by categories of aeronautical personnel and the amplification of personal training, especially for knowledge of the English language.

It was concluded that the navigation personnel is motivated and well prepared to participate in the mission, being substantiated a coherent and absolutely necessary program for physical training and not only for this category of aeronautical personnel.

Complex problems were registered with the technical-engineering staff, being identified aspects that disrupt the optimal development of the training program abroad, such as:

- low selection base, given that most of the personnel had to be provided by the 86th Borcea Air Base, which, at the same time, carried out significant air police missions with the same personnel after the annexation of Crimea by the Russian Federation.

- insufficient knowledge of the English language at the level established by the contract, which implied the organization of training series of personnel in the English language centers of the Air Force or with personnel detached from these centers at the 86th Air Base in Borcea.

- and, last but not least, but of primary importance, the poor motivation of the technical-engineering personnel to participate in the mission, given the fact that the legislative system for the remuneration of the military personnel existing at that time determined the reduction of salary revenues for the personnel who was in the mission abroad.

In order to correct this situation, the Air Force General Staff/Personal Service and Mobilization initiated a working group at the Armaments Department, a structure responsible for carrying out the program, with the participation of all entities that had to ensure its deployment in optimal conditions.

The working group, following several rounds of analysis, submitted to the senior leadership of the army the report and the proposal for an emergency ordinance to correct the identified problems.

At the proposal of the Minister of National Defense, taking into account several considerations, including, *the absence of regulations regarding the status of Romanian personnel sent abroad for training on a type of combat technique with high complexity, the need to motivate personnel to participate in this type of mission and the negative consequences of not urgently promoting the normative act that ensures the regulation of the status of participating aeronautical personnel to the mission*, the **Romanian Government** adopted the **Emergency Ordinance nr. 37 of 18.06.2014**, for Romanian personnel deployed to perform missions abroad in accordance with the provisions of contracts concluded under art. 1 lit. a) and b) of Law nr. 240/2013 for achieving the air operational capability included in Phase 1 of the initial transition phase of the Concept for the gradual achievement of air defense capability within the "Air Force Multirole Aircraft" program. [3] The normative act regulated in a unitary concept:

- structurile, responsabilitățile și procedurile pentru selecționarea personalului în vederea participării la misiune;

- competența aprobării prevederilor de grad, studii, clase de salarizare și coeficienți de ierarhizare, precum și armele și specialitățile militare ale funcțiilor din statul de organizare constituit pentru perioada misiunii;

- the structures, responsibilities, and procedures for selecting staff to participate in the mission

- the competence to approve the provisions of grade, studies, salary classes and ranking coefficients, as well as weapons and military specialties of the positions in the organizing state established for the period of mission.

- participation in the mission by deployment on the approved organizing state.

- the ability to assimilate the functions of the staff of the organizing State established for the period of mission

- special financial rights during the period of deployment: salary, compensation, money for each day, food, transport.

- the destination of funds necessary for participation in the mission, namely the deployment of personnel, miscellaneous procurement, logistical support and operating expenses, personnel selection, disability and death insurance, medical evacuation, including of deceased personnel, development of relations with local military and civilian authorities

- signing the commitment with the post-mission obligations of the staff.

For the implementation of the adopted legislative framework, the **Order of the Minister of National Defense nr. M. 92 of 21.08.2014**, regarding the preparation and execution of missions abroad in accordance with the provisions of contracts concluded under Law no. 240/2013. [4]

During these stages, in advance, the Air Force General Staff through Personal Service and Mobilization developed, and after issuing Order M. 92, approved *the Operational Procedure for the selection for personnel participation in the mission*, with the thorough and coherent regulation of this complex process.

From a legislative and regulatory perspective, the process was over, but the actual development generated multiple challenges, successfully overcome by the responsible staff.

### **3. PHASE I OF THE TRANSITION OF THE “AIR FORCE MULTIROLE AIRCRAFT” PROGRAMME**

The training of personnel for the operation of the F-16 fighter aircraft took place, according to the contract, at the 5th Monte Real Air Base in Portugal, started in September 2014, was completed in April 2017 and consisted, in a first stage, in the training of 88 military personnel, aeronautical personnel, pilots, technical-engineering personnel, mission planners, specialists in electronic warfare and metrology. During the preparation of the mission, the Air Force General Staff developed the training program for the personnel to be deployed for training abroad, designed the mission state and constituted the target groups that constituted the selection basis for participation in the mission.

The responsibility for selecting personnel to execute missions under contracts was assigned to the Armaments Department and the General Staff, through the Air Force General Staff.

According to the established coordination matrix, the Armaments Department had the competence to select personnel for the execution of technical representation missions and those in the metrological field, the Air Force General Staff having the responsibility of selecting the aeronautical personnel to frame the organization state of the multirole squadron - pilots, engineers, technical military foremen, flight mission planners.

Until their deployment to Portugal, the seafarers completed the initial physiological training course and the water survival course, and in the United States of America centrifuge training and testing to test the body's resistance to high overloads.

For the technical-engineering staff, the knowledge of English language was a very important criteria and sometimes difficult to achieve, inclusion in the target groups being achieved after an intense training process and testing the level acquired by the specialized center of the General Directorate for Human Resources Management.

According to the operational procedure approved by the Air Force General Staff, special selection committees were set up, with attributions to verify the fulfillment of the conditions for participation in the mission and to submit proposals with those eligible. The head of the Air Force had the competence to nominate the personnel, the proposals being subsequently submitted hierarchically to the Ministry of National Defense for the approval of the order of deployment.

The establishment of the first detachment was a challenge for the responsible personnel, given the novelty of the process, the deadlines from the moment of drafting the regulations to the actual deployment, but also some unforeseen situations regarding the last-minute medical fitness of selected staff, which implied their urgent replacement.

With multiple lessons learned, useful in approaching the later stages, the first detachment of 23 pilots, engineers, technicians and mission planners took off on September 30, 2014, with a C-130 Hercules aircraft from the 90th Air Transport Base "Comandor aviator Gheorghe Bănciulescu" and, after a 7-hour flight, landed at the 5th Monte Real Air Base in Portugal, the venue of the passage program.

Until April 2017, when the last detachment completed the training, several series were deployed to Monte Real Air Base, which went through courses specific to each specialty with different training durations, all pilots being trained at Combat Ready level or higher qualifications, being able to execute the full range of missions, according to the combat possibilities of the purchased F-16 aircraft, and the technical-engineering personnel were able to ensure the maintenance of the aircraft.

The absolute premiere was the very short acclimatization period for the flight on the F-16 aircraft, the first flight in simple command being executed by the first three pilots detached after less than two months of training, on November 26, 2014, captain-commanders Andrei Constantin and Micloș Cătălin and, very shortly, lieutenant commander Marin Mihăiță. The experience previously gained by operating the MiG-21 LanceR aircraft, the large number of flight hours accumulated on this aircraft, along with the participation in numerous exercises and missions both domestic and abroad.

After two years of training, on a sunny day of Thursday, September 29, 2016, the first six F-16 Fighting Falcon fighter aircraft purchased by Romania, inscribed with the numbers 1610 (double command, pilot captain-commander Cătălin Micloș-Miki, second cabin, Chief of Staff of the Air Force, Major General Laurian Anastasof), 1608 (single command, pilot Lieutenant Commander Cristian Cretu-Dodo), 1604 (single command, pilot lieutenant commander Lucian Tatulea-Tato), 1601 (simple command, pilot captain-commander Constantin Andrei-Zoro), 1602 (simple command, pilot captain-commander Mihăița Marin-Miță) and 1603 (simple command, pilot lieutenant commander Alin Cachiș-Pishta) took off at 08.00 local time, from the 5th Air Base in Monte Real, Portugal and, after a record flight of 4,000 km, with a stopover for recovery at the Air Base in Aviano, Italy, at 17.07 Romanian time, entered the national airspace, landing after a beautiful aerial evolution in formation on the new runway of the 86th Air Base "Lieutenant aviator Gheorghe Mociorniță" from Borcea.

According to the delivery plan, the other six purchased aircraft arrived in the country in series of three aircraft, on December 15, 2016, respectively 28.09.2017, and in accordance with the provisions of Law 237/2019, the 53rd Fighter Squadron was completed, starting with 25.03.2021, with five more F-16 aircraft.

#### **4. CONCLUSIONS**

The continuation of the Air Force endowment program with modern combat aircraft, at the operating standards of the contemporary theater of operations is a requirement of our days and of the current security context.

But the pertinent conclusions regarding this program, which we exemplify in summary, were presented by the head of the Romanian Air Force, Lieutenant General Laurian Anastasof, at the Open Day organized after the arrival of the first six aircraft at the 86th Air Base, on Saturday, October 8, 2016, attended by active, reserve and retired soldiers. lovers of military aviation: "The F-16 program is the most important endowment program carried out by the Romanian... which gives us, for Romania, the air defense capability we need... The platform is extremely complex, reliable, brings extra capability that we could hardly hope for... With this platform, we are all stronger! It is by far the most powerful weapon the Romanian Army has! They are by far the most invaluable people we have today in the Romanian Army, those who exploit them, pilots, engineers, technicians, insurance personnel, all those who make it possible to fly this plane... Let's bring history to where it is from, maintain tradition, have respect and appreciation for the past and continue giving 53 Squadron what it deserves, everything it needs, younger, newer and more beautiful, including a fourth-generation platform... Because that's what we've been able to do, to move from generation III to generation IV and to have created the prospects of hoping to move on to generation V... It is the moment when with a lot of diplomacy, with even more intelligence to bring combat aviation... where and where they deserve... The primary mission of 53 Squadron was, is and will be the defense of national airspace."

The consequence of this programme? In the middle of November 2023, the F-16 centre at the 86th Air Base "Lieutenant Aviator Gheorghe Mociorniță" in Fetești, Borcea, was officially inaugurated.

The centre's inauguration is particularly significant, as it is probably the most important moment for the Romanian Air Force in 2023, a year in which three more F-16 aircraft have arrived and the Parliament has approved the purchase of F-35 Lightning II aircraft. Romania already has 17 F-16 Fighting Falcon aircraft purchased from Portugal, having signed the contract for a further 32 aircraft from Norway.

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