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PHOTOGRAPHIC INTERPRETATION REPORT

**CHRONOLOGY OF AIRFRAME PLANT 116
ARSENYEV, USSR**

JANUARY 1968
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CHRONOLOGY OF AIRFRAME PLANT 116 ARSENYEV, USSR

INTRODUCTION

This report is a study of the chronological development of Airframe Plant 116, Arsenyev, USSR [redacted] 44-08-53N 133-15-11E) and is one of a series of reports on Soviet missile and aircraft production and test facilities.

Airframe Plant 116 is in the valley of the Daubikhe River in the Soviet Far East on the southern edge of the city of Arsenyev (Figure 1). The plant encompasses approximately 128 acres and is both road and rail served. Plant 116 is laid out on a rectangular pattern that can facilitate future expansion, and additional building sites can also be provided by the unused portion of the adjacent Arsenyev Airfield. This sod airfield, approximately 5,600 feet in length, is used primarily as a test and flyaway field. Although there is a great deal of land available for development, only 3 major construction changes have occurred at this plant since 1954: an addition to a large workshop; completion of a new subassembly building; and the expansion of the main final assembly/subassembly building.

At the present time Airframe Plant 116 comprises 49 buildings with approximately 1.2 million square feet of roof cover (Figure 2). The main final assembly/subassembly building contains 600,000 square feet of roof cover and construction work is still continuing on new sections of the building. When the additions are completed on this large fabrication building, it will contain approximately 0.75 million square feet of covered floor space. In addition to numerous warehouses and support buildings, there are 12 production-type buildings. The only engine test facility identified at the plant was removed during early 1964 to provide space for an addition to a large workshop. This installation does not have an active steam or electric powerplant; a possible powerplant noted at the site may be a diesel plant on a standby basis. The building-by-building construction history of the plant is presented graphically in Figure 3 and its associated table, which also provides details of construction within the plant; item numbers are keyed to Figure 3 and its table.

Prior to the large-scale photographic coverage of this installation, there was no photographic evidence indicating the final product of Plant 116. Collateral sources had linked the plant with the production of YAK-18 (MAX) trainers. 1/ Recent photography, however, has confirmed that Plant 116 is involved in both aircraft and missile production. In May 1966, AN-14 (CLOD) aircraft were identified at this plant for the first time. The number and location of the AN-14 aircraft within the plant suggested that these aircraft were being manufactured here. An open source later confirmed that Arsenyev was indeed the production site for the AN-14. 2/ Thirty-two probable SS-N-2 (STYX) crates, aligned in 2 rows in the south-central portion of the plant, were also identified on photography of May 1966. These crates have a peaked top and a protrusion on one end and [redacted]

(Figure 4). The identification of this type crate also confirmed collateral information which associated the plant with missile production. 3/ On large-scale photography of August 1967, approximately 36 probable STYX missile crates were identified adjacent to a hangar/workshop.

HIGHLIGHTS OF THE DEVELOPMENT OF AIRFRAME PLANT 116

The first photographic coverages of Airframe Plant 116 were obtained in April 1954 4/ and December 1956. No additional photography was obtained until September 1961, the date of the first KEYHOLE mission over this installation. Since that date Plant 116 has been imaged on 28 photographic missions. The interpretability of the small-scale photography has varied greatly from mission to mission; however, recent excellent large-scale coverage has been obtained. [redacted] have both yielded a great amount of detail about the plant.

1954-1956

Arsenyev Airframe Plant 116 was first observed on large-scale photography of April 1954 and more than 2 years later on photog-

raphy of December 1956. In 1956 the plant contained approximately 790,000 square feet of roof cover. Facilities identified at the plant in 1956 included a final assembly/subassembly building (item 40), an engine test building, an administration building, a checkout hangar, 10 workshops, several warehouses, and support buildings. The only significant change observed in the plant during this 2-year period was the construction of a storage tank in the northeast corner.

1956-1961

The first KEYHOLE photography of Plant 116 was obtained on [redacted]. The interpretability of this coverage was poor and precluded the identification of all but gross features. The only changes discernible were the addition to a workshop (item 28) and the initial construction work on an addition to the final assembly/subassembly building (item 40).

1962

Better quality photography permitted the identification of several small support buildings on photography [redacted]. Construction was continuing on the final assembly/subassembly building. In August, construction was noted on an addition to a shop building (item 33). By November 1962, the new subassembly section (item 40c) was almost completed.

1963

[redacted] was the only photographic coverage of the plant during 1963. The additions to the final assembly/subassembly building appeared complete when observed at that time. Roof cover of this building had been increased by more than 70 percent, making the overall dimensions for this building [redacted]. Construction was continuing on the addition to the shop building (item 33b). Discernible footings indicated that this building would be almost 800 feet in length upon its completion. A small support building (item 34) was identified for the first time.

1964

Several small new support buildings were identified on photography of February 1964. An engine test building had been razed to provide space for the large new addition to the shop building (item 33b). This construction appeared to be complete when observed in November. The size and roof configuration indicated that this building would be utilized as a machine shop and subassembly area. Footings observed on the southeast side of the final assembly/subassembly building (item 40) indicated further expansion.

1965

The new subassembly section (item 40e) which was under construction in November 1964 was completed 1 year later in November 1965. As seen in December, construction was begun on a contiguous final assembly hall (item 40d).

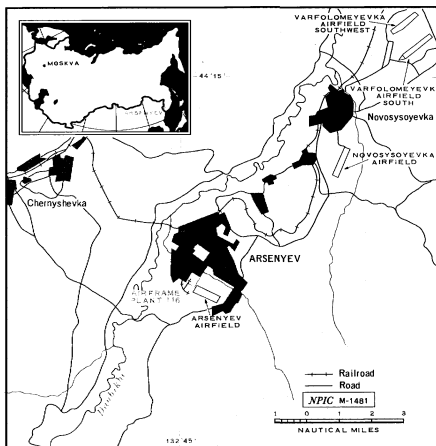
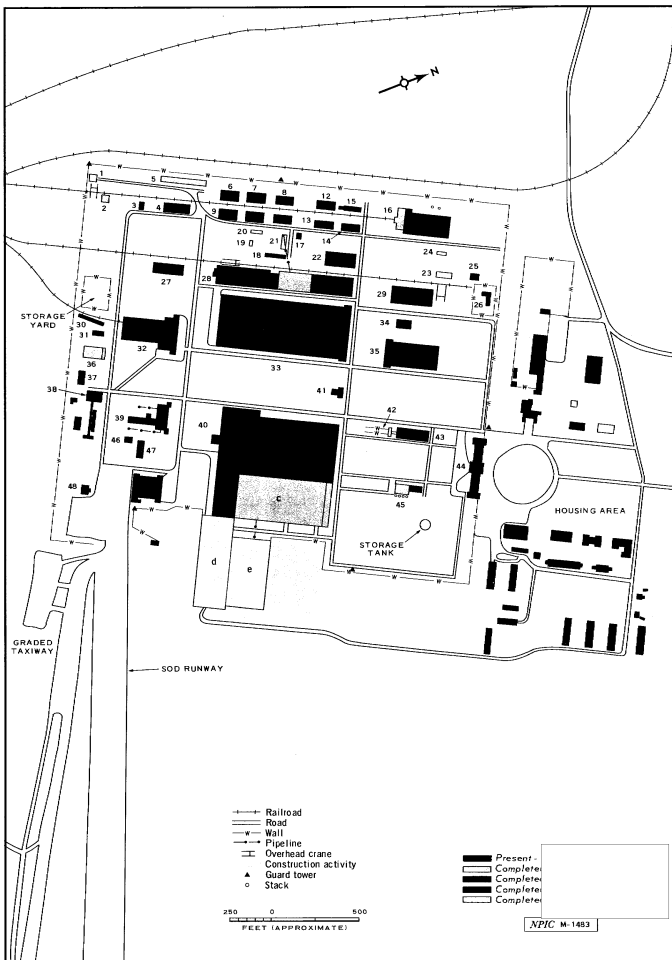


FIGURE 1. LOCATION OF ARSENYEV AIRFRAME PLANT 116, USSR.

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Item	Description	Dimensions * (ft)			Roof Cover (sq ft)	Explanatory Notes
		L	W	H		
1	Support bldg					Bldg probably complete directly in front of bldg
2	Support bldg					overhead crane
3	Support bldg					
4	Warehouse/workshop					
5	Storage shed					
6	Warehouse	110 x 45 x 15			4,950	
7	Warehouse	110 x 45 x 15			4,950	
8	Warehouse	110 x 45 x 15			4,950	
9	Warehouse	110 x 45 x 15			4,950	
10	Warehouse	110 x 45 x 15			4,950	
11	Warehouse	110 x 45 x 15			4,950	
12	Warehouse	110 x 40 x 15			4,400	
13	Warehouse	110 x 40 x 15			4,400	
14	Warehouse	110 x 40 x 15			4,400	
15	Workshop					
16	Heat treatment bldg					
17	Support bldg					Small section added to S end between 1956 and 1962; roof vests visible on N end of bldg
18	Support bldg					
19	Support bldg					Small addition added between 1963 and 1964
20	Support bldg					
21	Support bldg					
22	Workshop					A probable sawdust burner on W end. Stacks of wood near bldg indicate that it may be involved in crate manufacture
23	Support bldg					
24	Support bldg					
25	Support bldg					Small addition erected between Dec 56 and Jun 63
26	Support bldg					
27	Warehouse/workshop					Length overall; center section added between 1956 and 1961; bldg consists of various shop sections and prob also used for shipping and receiving
28	Workshop					Length aprx. High-bay section 40 ft high
29	Heat treatment bldg					
30	Storage bldg					
31	Storage bldg					
32	Hangar/workshop					Engine test bldg removed by Feb 64 to permit new construction; 33b apparently complete
33	Subassembly bldg/machinshop					
a						
b	Support bldg					Measurements overall; admin section on W end is
34	Support bldg					
35	Machinshop					
36	Workshop					
37	Workshop					
38	U/I bldg					Covered conveyor/pipeline connects this bldg to another small structure. Structure with unusual irregular shape; large diameter pipe parallels E side of bldg and enters structure on N. N section has hangar doors for aircraft entry
39	Poss test bldg					
40a	Final assembly/subassembly bldg					Considered complete
b	Subassembly section					Considered complete
c	Final assembly hall					Considered complete
c	New final assembly hall					height measured to eaves; door opening 145 ft wide; does not appear to be operational! Two bays being added to this section; additional construction actively visible adjacent to it
e	Subassembly section u/c					
41	Support bldg					
42	Storage yard					
43	Heat treatment bldg					
44	Admin bldg					Footing for new wing present in 1956; poor interpretability of photography made impossible the establishment of a completion date until Feb 64
45	Poss powerplant					New section erected between 1956 and 1961; small stacks along E side; bldg does not appear to be active
46	Support bldg					
47	Support bldg					
48	Flight operation bldg					
49	Final checkout hangar					Length measurement overall

FIGURE 3. LAYOUT OF AIRFRAME PLANT 116.

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1966

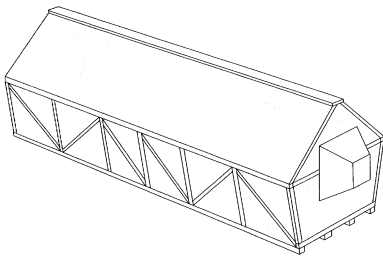
No significant changes were observed at the plant during 1966. Construction was continuing on the new final assembly hall. The taxiway to the airfield and parking areas was improved.

1967

The final assembly hall was completed by August 1967. The recently completed subassembly section (item 40e) was again undergoing expansion. A concrete apron was being constructed from the taxiway to the final assembly hall doors.

REFERENCES

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NPIC M-1064

FIGURE 4. PERSPECTIVE OF SS-N-2 STYX CRATE.

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MAPS OR CHARTS

ACIC. USATC, Series 200, Sheet 0282.22

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3. CIA. OCI 0333/62, P.L.R. USSR, *Guided Missile Production*, 8 Mar 62 (SECRET)
4. USAF. DPIR Functional Analysis (BB) No. 163, *Aircraft Assembly Plant, Semenovka #116*, Mar 56 (TOP SECRET WINDFALL, subsequently changed to TOP SECRET CHESS) Note: This report is based on photography of April 1954.

REQUIREMENT

CIA. G-DIS-82,973

NPIC PROJECT

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