



**BASIC IMAGERY
INTERPRETATION
REPORT**

**NATIONAL PHOTOGRAPHIC
INTERPRETATION CENTER**

**PING-PA PROPULSION SYSTEM
RESEARCH AND DEVELOPMENT CENTER**



25X1

STRATEGIC WEAPONS INDUSTRIAL FACILITIES

CHINA

SEPTEMBER 1971

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RCA-09/0011/72

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INSTALLATION OR ACTIVITY NAME	COUNTRY
Ping-pa Propulsion System Research and Development Center	CH

UTM COORDINATES	GEOGRAPHIC COORDINATES
NA	26-22-35N 106-15-15E

MAP REFERENCE

SAC. US Air Target Chart, Series 200, Sheet 0496-15, scale 1:200,000

NEGATION DATE (If required)
NA

ABSTRACT

1. The Ping-pa Propulsion System Research and Development (R & D) Center was probably designed for the development and testing of new and improved aircraft propulsion systems. The center appears to be in the final stage of construction. When completed, it should contain the most modern and complete grouping of aircraft propulsion test facilities in China. Only sea level static test cells have been identified so far; however, there is ample space to add other facilities such as altitude simulation test facilities.

2. This report includes a location map, photographs, line drawings, references, and tables of mensural and chronological data.

INTRODUCTION

3. The Ping-pa Propulsion System R & D Center is located 3 nautical miles (nm) south of the walled town of Ping-pa in Kweichow Province (Figure 1). It is approximately 28 nm west-southwest of Kuei-yang and approximately 19 nm east-northeast of An-shun. The center is well dispersed in several small valleys.

4. Applied research and improvements and modifications to existing aircraft propulsion systems will probably be the main function of the center.

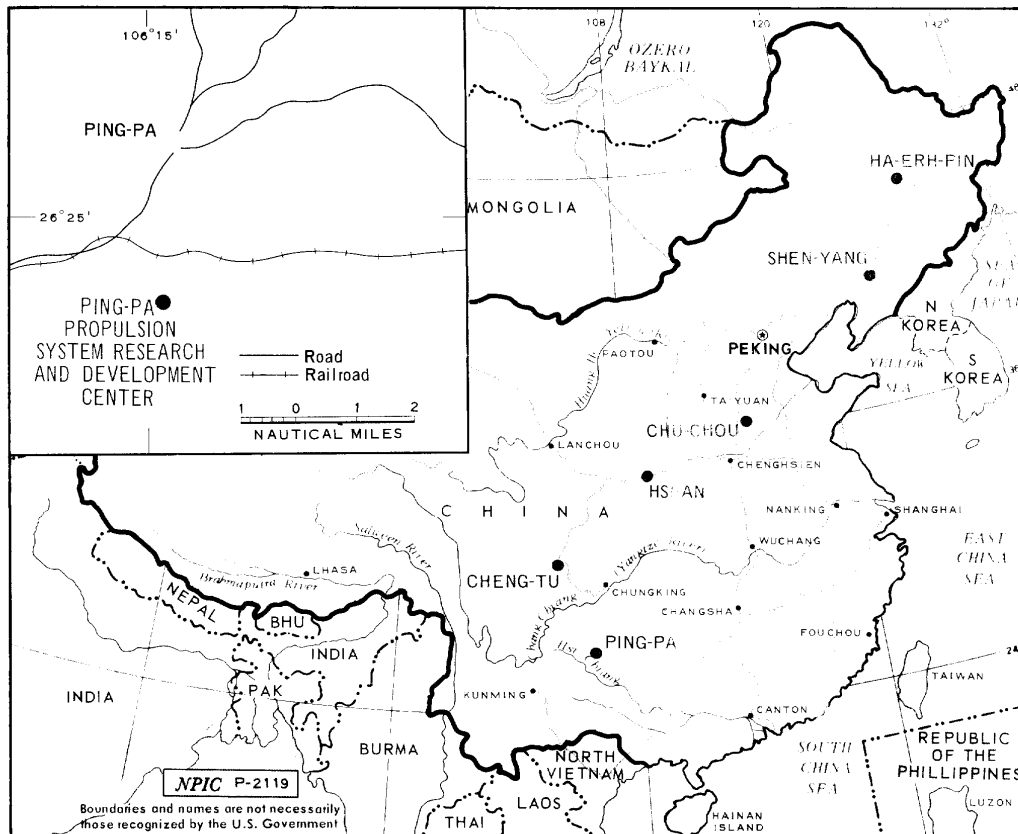


FIGURE 1. LOCATION MAP

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Related Installations

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5. The Ping-Pa Propulsion System R & D Center is probably associated with the five known aircraft engine production plants in China: Hsi-an Aircraft Engine Plant 430 (BE [redacted] Cheng-tu Aircraft Engine Plant 420 [redacted] Ha-erh-pin Aircraft Engine Plant 120 [redacted] Shen-yang Aircraft Engine Plant 410 [redacted] and Chu-chou Aircraft Engine Plant 331 [redacted] Engines produced at these plants will probably be thoroughly tested at the center. Test results and recommendations for engine improvements would probably then be forwarded to these engine plants. These five engine plants are shown on Figure 1.

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6. An industrial area containing 48 buildings and structures is under construction 0.5 nm southeast of the engine test area. It may be related to the center, but because there are no physical connections such as roads or rails it is not included in this report. Major buildings in the area include an assembly/shop building, six engineering/shop buildings, and two administration/engineering buildings. Construction of this area was started in [redacted] considerable progress had been made.

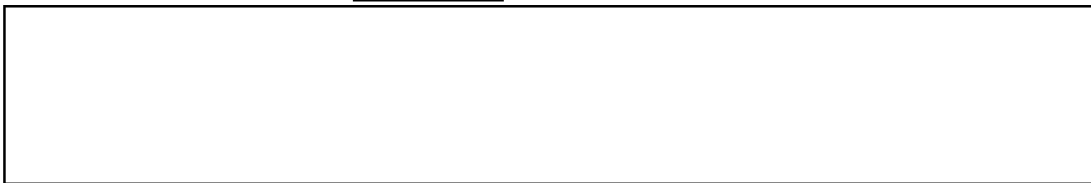
BASIC DESCRIPTION

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7. The center is comprised of three main areas--an aircraft engine test area, a probable aircraft engine test area, and an assembly/shop area (Figure 2). [redacted] these three areas contained a total of 325 buildings and structures. Major buildings included administration/engineering, engineering/shop, engineering/laboratory, aircraft engine test, and assembly/shop buildings. Other buildings were shops, warehouses, engineering/test buildings, and two heating plants. An engine test building, an engineering/test building, a probable engineering/laboratory, and an engineering/shop building were observed under construction on photography [redacted]

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Chronology

February 1966 - March 1969

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9. Construction of the center was started between [redacted] Six small-scale photographic coverages of varying interpretability were obtained between [redacted] The first large-scale coverage of the center was obtained in [redacted] The three main areas and the two support areas were identifiable at that time. [redacted] the center consisted of 213 buildings; 198 were complete and 15 were under construction.

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April 1969 - June 1971

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10. Three photographic coverages of the center were obtained between [redacted] [redacted] the center was in the late stage of construction and contained 325 buildings and 11 fuel storage tanks. Of the 325 buildings, 320 were complete and five were under construction.

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11. The total floorspace of the center was [redacted] [redacted] Those buildings under construction at that time will, when completed, add at least [redacted] of additional floorspace.

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12. A detailed construction chronology of major buildings is given in Tables 1, 2, and 3 and Figures 3, 8, and 9.

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Aircraft Engine Test Area

13. Key facilities in the engine test area include four engine test buildings. One of the engine test buildings (item 4, Figure 3 and Table 1) contains two single, through-type engine test cells. Each of the other three engine test buildings (items, 1, 2, and 5) contains a single, through-type engine test cell.

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14. The two-cell engine test building (Figure 4) was in the midstages of construction when first seen in [redacted] When last seen in [redacted] this building was in the late stages of construction.

15. The engine test cells measure approximately [redacted] These cells are separated by a central control room and a probable shop area. The central control room is approximately [redacted] The probable shop area is approximately [redacted]

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16. Each test cell has an exhaust/silencer system. The test cells will exhaust through a short, horizontal augmenter tube into a boxlike exhaust sound treatment chamber. The irregular design of these chambers on this particular test building may be related to soil conditions in the area.

17. Each of the other three engine test buildings (items 1, 2, and 5, Figure 3) contains a single, through-type engine test cell. These three buildings are different in configuration and size, but they all have the same basic components (Figures 5, 6, and 7). Each building is comprised of an air intake section, an engine test cell, a control room, an augmenter tube, and an exhaust sound treatment chamber. An engine test building at Hsi-an Airframe Plant Yen-liang 172 [redacted] contains a test section similar to the single cell through-type buildings at the center. However, at Plant 172 the test section has been built below grade and has been partially earth mounded.

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18. Four fuel storage tanks (Figure 3) are located adjacent to the test area. Each tank is [redacted] Total volume of the tanks is approximately [redacted], and the total storage capacity is [redacted] Each tank has an attached pumping/metering station. The tanks are connected to the engine test buildings by underground pipelines.

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Probable Aircraft Engine Test Area

19. The probable aircraft engine test area (Figures 2 and 8, Table 2) has four probable aircraft engine test buildings (items 3-6, Figure 8) containing through-type engine test cells. The exact number of test cells cannot be accurately determined from present photography.

20. Each building contains several probable test cells, control rooms, and some shop space. Based on their size, these four probable engine test buildings could contain at least 20, and as many as 25, through-type engine test cells.

21. The large number of engine test cells (five confirmed and 20-25 probable) at the center would be necessary to prevent testing delays due to down-time, accident, and/or cell occupancy.

Assembly/Shop Area

22. Major facilities in the assembly/shop area (Figures 2 and 9, Table 3) are two large assembly/shop buildings (items 17 and 22, Figure 9), two engineering/laboratory buildings (items 18 and 20), and two engineering/shop buildings (items 21 and 26). One of the engineering/shop buildings (item 26) is connected to the adjacent assembly/shop building (item 22) by an enclosed passageway.

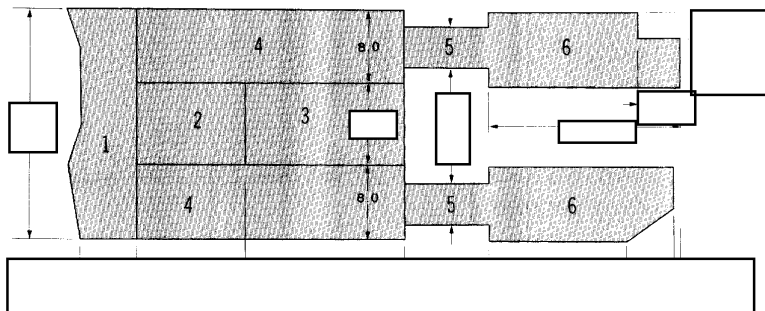
23. The limited amount of assembly/shop floorspace at the center precludes mass production of aircraft propulsion systems. The assembly/shop area will probably be used primarily for assembly and/or checkout of aircraft engines prior to testing.

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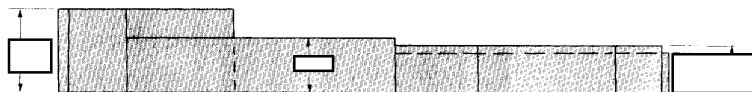
PLAN VIEW



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SIDE VIEW



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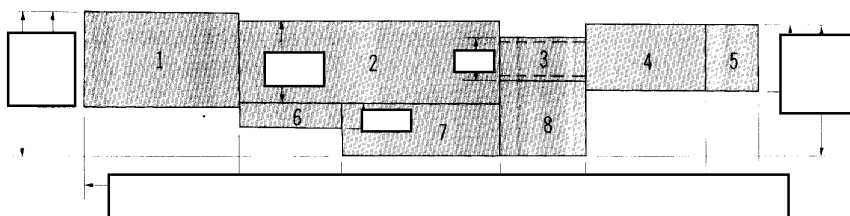
- 1 - Air intake area
- 2 - Central control room
- 3 - Central shop area
- 4 - Single engine test cell (2)
- 5 - Exhaust duct - will probably house an augmentor tube
- 6 - Exhaust sound treatment chambers (2)

Dimensions given in meters
To convert to feet:
Multiply meters by 3.28084

NPIC P-2122

FIGURE 4. PLAN VIEW AND SIDE VIEW OF TWO-CELL ENGINE TEST BUILDING (See item 4, Figure 3)

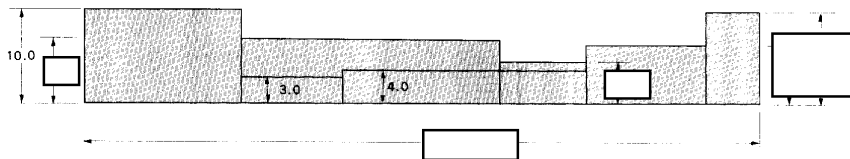
PLAN VIEW



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SIDE VIEW



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- 1 - Air intake chamber
- 2 - Engine test cell
- 3 - Exhaust duct-contains 4.0 m diam augmentor tube
- 4 - Exhaust sound treatment chamber
- 5 - Exhaust stack
- 6-8 - Control room

Dimensions given in meters
To convert to Feet:
Multiply meters by 3.28084

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FIGURE 5. PLAN VIEW AND SIDE VIEW OF SINGLE-CELL ENGINE TEST BUILDING (See item 1, Figure 3)

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Essential Services

24. Electrical powerlines have been identified throughout the center, but no electrical power source has yet been identified.

25. Rivers in the immediate area of the center would afford an adequate water supply. However, to date no water storage facilities or cooling facilities have been identified at the center.

26. The center is primarily a road-served installation. Roads throughout the center and the immediate area are serviceable, improved dirt roads. These roads connect the center with hard-surfaced, all-weather roads leading to An-shun, Kuei-yang, and Ping-pa.

27. The center is situated approximately 0.8 nm south of the Kuei-yang to An-shun rail line. A short spur from this rail line serves a transshipment area (Figure 2) which is probably associated with the center. The rail spur terminates at the transshipment area and does not enter either of the three main areas of the center.

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28. There is no airfield or landing strip at the center. Kuei-yang/Lei-chuang Airfield [redacted] is located approximately 14.9 nm east-northeast of the center. This airfield is connected to the center by road and could provide necessary air services.

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29. There are two main housing areas located west of the assembly/shop area (Figure 2). These two areas contained 70 multistory apartment buildings in [redacted] and at least six additional apartment buildings were under construction. These housing areas were first seen under construction in [redacted]. As the center increased in size, the number of apartment buildings increased. As [redacted] the two housing areas contained approximately [redacted] of floorspace. The villages near the center were also increased in size from [redacted]

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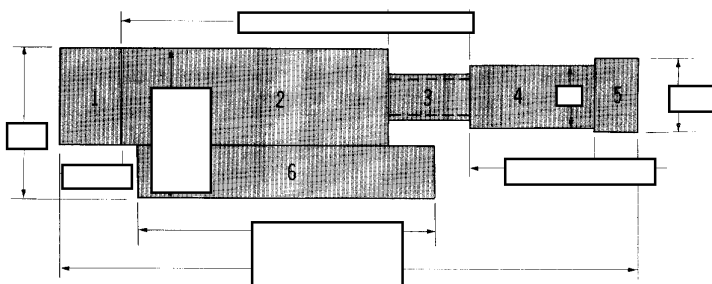
Security

30. No overall security measures have been identified at the center. However, fencing, gates, and walls have been observed in some areas. The terrain and the remote location of the area provide some natural security barriers.

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PLAN VIEW



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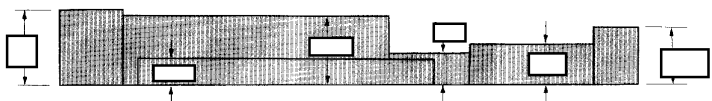
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SIDE VIEW



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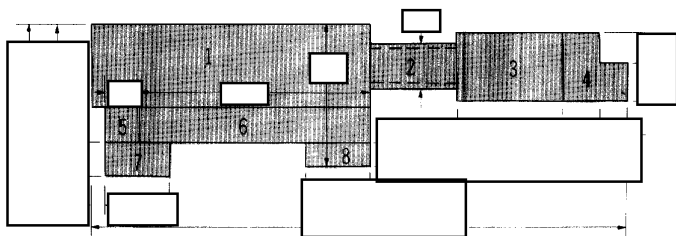
- 1 - Air intake chamber
- 2 - Engine test cell
- 3 - Exhaust duct-contains 4.0m diam augmenter tube
- 4 - Exhaust sound treatment chamber
- 5 - Exhaust stack
- 6 - Control room

Dimensions given in meters
To convert to Feet:
Multiply meters by 3.28084

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FIGURE 6. PLAN VIEW AND SIDE VIEW OF SINGLE-CELL ENGINE TEST BUILDING (See item 2, Figure 3)

PLAN VIEW



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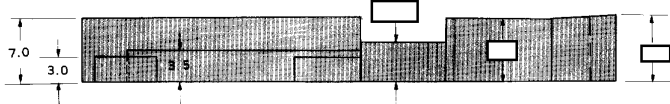
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SIDE VIEW



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- 1 - Engine test cell with air intake chamber
- 2 - Exhaust duct - contains 4.0 diam augmenter tube
- 3 - Exhaust sound treatment chamber
- 4 - Exhaust stack
- 5-8 - Control room

Dimensions given in meters
To convert to Feet:
Multiply meters by 3.28084

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FIGURE 7. PLAN VIEW AND SIDE VIEW OF SINGLE-CELL ENGINE TEST BUILDING (See item 5, Figure 3)

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REFERENCES

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[Large Redacted Area]

MAPS OR CHARTS

SAC. US Air Target Chart, Series 200, Sheet 0496-15, scale 1:200,000

DOCUMENTS

- 1. FTD. HT-23-576-68, *Industrial Safety at Jet-Engine Testing Stations and Laboratories*, by L. I. Varlamov, translated edition, 19 Mar 69 (UNCLASSIFIED)
- 2. US Forces. *Photo Industrial Study No. 5 the Aircraft Industry*, Feb 45, p. 17 (UNCLASSIFIED)

REQUIREMENT

COMIREX J02
NPIC/IEG/SD/SIB Project 222311

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