ADDRESS ALL COMMUNICATIONS TO
LIGHTHOUSE INSPECTOR
BUFFALO, N. Y.

WDG-WPD

# DEPARTMENT OF COMMERCE
## LIGHTHOUSE SERVICE

225

LIGHT JAN 30 1915 HOUSES

Hydrog.
Engr. Cons
Mar. Engr.
Personnel
Accounts.
Contracts
Ch. C.K.
Dist. Lobby
Chemr.

OFFICE OF INSPECTOR, 10TH DISTRICT
ROOM 304, FEDERAL BUILDING
BUFFALO, N. Y.

January 29, 1915.

Buffalo, N.Y.
Fog-Signal--Vibration

Suggest Keep station under watch + report at end of 3 mo if vibration are disappearing. Toledo Harbor is similar in design to this station but is larger + wider. If no improvement need sub. vertical engs + comps.

2/5/15 wrote 10th.

HPB Can the engines be put in cellar? JE Febr

HPB Feb 2

Commissioner of Lighthouses;

In reply to the Bureau's inquiries dated November 27, 1914:

One engine might go in 1 compartment + one in another of the cellar. Let's ask the Insp

HPB Feb 2

The Fairbanks-Morse 22 HP compressors of this plant work very smoothly. There is no pounding such as accompanies the operation of many of the Hornsby-Akroyd Engines, due either to lack of balance or imperfect fuel mixture. The fuel mixture of the Fairbanks-Morse Engine is easily adjusted and the variation of the load consequent on the operation of the unloader is well taken care of by the governor without undue effect on the velocity or regularity of the fly wheel revolution.

OK for both noted JE Febr

It is not believed that the balancing of these compressors can be materially improved or that any lack of attainable balance is responsible for vibration noted.

The reciprocating parts of these directly connected compressors are heavier than those of compressors like the Hornsby-Akroyd, where a geared speed reduction and a constantly varying relation in the time of occurrence of the engine and compressor piston alternations reduces the percentage of strokes in which both pistons travel simultaneously in the same direction to a minimum.

LIGHT
SAN DIEGO
HOUSES

There is no vibration at Toledo Harbor Light Station, where Hornsby-Akroyd Engines and compressors are used.

Howard